

# FLIGHT

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AND AIRSHIPS

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## EDITORIAL COMMENT



RARELY have we had in Europe a contest of any sort with so many competitors, and never before one of such a strenuous nature as the Circuit of Europe, which has just concluded, as the first of a series of difficult tests in the International Touring Competition which started at Berlin on July 20. It may be recollected that this competition is confined to aircraft of the light 'plane class, categories I and II, *i.e.*, machines with a tare weight of not more than 400 kg. (880 lb.), and 280 kg. (616 lb.) respectively, but that in view of the long stages in the Circuit of Europe, a tolerance of 15 per cent. on these tare weights has been allowed, which brings the permissible tare weight of class I up to 1,012 lb., and that of class II machines to 708 lb.

The rules and regulations of this competition are not altogether simple, and there is thus some excuse for the fact that a large section of the daily press has entirely failed to understand that the Circuit of Europe was a not a "race," and that the first man home is not necessarily the winner. Readers of FLIGHT will know that the Circuit of Europe was mainly a reliability tour, and that in order to get full marks for speed it was necessary for machines of class I to maintain an average speed around Europe of 108.7 m.p.h. For this average speed the maximum marks awarded are 195. To this figure must be added 75 marks for those competitors who have not failed to spend any night in one of the compulsory controls. Thus the maximum that can be gained in the Circuit of Europe is 195 for speed and 75 for regularity, or 270 points.

An average speed of 109 m.p.h. does not, at first sight, appear very high. It should be remembered, however, that the weather over large portions of the route has been extremely unfavourable. This has necessarily in many cases reduced the speed made good over the ground, and has compelled many competitors to fly for many hours at absolutely full throttle in order to make sure of reasonably high

### DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1930	
July 27	London Gliding Club "Gliding Camp," Ivinghoe.
Aug. 3	
Aug. 4	Official Reception of Miss Amy Johnson at Croydon.
Aug. 9-24	Gliding Competitions, Rhön, Germany.
Aug. 15-31	Circuit of Italy.
Aug. 17	Shanklin Meeting.
Aug. 30	Liverpool-Manchester Inter-City Air Race.
Aug. 30	Air Fete, Crumlington, Newcastle-on-Tyne.
Aug. 30	Bedford Club Meeting.
Sept. 1-6	5th International Air Congress at The Hague.
Sept. 6	Opening of Ratcliffe Aerodrome, Leicester.
Sept. 6	Bristol and Wessex Ae.C. Air Display and Garden Party.
Sept. 13	N.F.S. Air Pageant, Tollerton, Nottingham.
Sept. 14	N.F.S. Air Pageant, Leeds.
Sept. 20	Liverpool Air Pageant.
Sept. 27	N.F.S. Air Meeting, Hanworth.
Nov. 28- Dec. 14	Paris Aero Show.
1932	
May 31	Closing date for Cillon Cross-Channel Glide £1,000 Prize.

marks for speed. It speaks well for the reliability of British light 'plane engines that they have, on the whole, stood up to this very strenuous test in a most satisfactory manner.

The rest of the competition consists of take-off and landing tests, and a fuel consumption test, none of which will impose nearly such severe strains on the engines. In fact, the remaining tests are aircraft tests much more than engine tests.

As far as can be judged at present, all seven British competitors have done very well indeed in the Circuit of Europe. It is believed that Broad has scored his full 270 points, while Butler, Thorn and Andrews do not seem very far behind, and the two women pilots, Lady Bailey and Miss Spooner, have completed the course among the earlier arrivals, and have, presumably, therefore, scored reasonably high marks. There seems, unfortunately, to be a probability that Mr. Butler may be disqualified, as he broke and replaced his propeller. This, under the rules, is not permitted unless the spare propeller was carried on board during the Circuit of Europe. It is assumed that Butler's protest against disqualification is based on the fact that he was bogged on one of the official aerodromes, where competitors should be immune from such a condition. It is, we fear, unlikely that the protest will be accepted.

After the Circuit of Europe, the next highest number of points is to be gained in "practical qualities" of the machines, *i.e.*, comfort, safety appliances, engine starting, folding and unfolding the wings, and so forth. For these qualities 140 points maximum will be awarded, and in most respects British machines ought to do well.

In the actual technical tests, take-off, landing and fuel consumption, for which 60 and 30 points respectively will be the maximum awarded, the position may possibly be slightly less favourable to British machines. It is known, for instance, that some of the foreign machines are of relatively low wing loading, and they may, therefore, score rather heavily in getting over the obstacle. It is likely, however, that such machines as "shine" particularly in this one respect will have gained fewer points in the Circuit of Europe, owing to a lower cruising speed,

and so matters may tend to be evened up. Altogether Britain's chances are quite good, and the performances put up so far by the British machines are such as to give cause for an optimistic outlook.

❖ ❖ ❖

As we go to press, the airship R 100 is worming her way through the various "lows" and "highs" which infest the Atlantic. She carries with her an overflowing load of good wishes. We realise that

**Off to  
Canada**

the future prospects of airships for better or for worse cannot and do not hang on a single voyage by one airship of special and experimental design. Yet this flight is a great propaganda effort, and popular feeling will be much, probably unduly, affected by the degree of success which it attains. Technical papers and their readers ought not to be swayed by every breath of popular feeling. We regard the flight as an experiment which will surely teach us much, and we hope that it will be the forerunner of a regular airship service between Great Britain and Canada. We wish that the weather could have been favourable all the way, and so have given R 100 an easy victory. It has not been so. One "low" in particular—the one which spoilt the Test match—has proved a very fickle jade. Squadron-Leader Booth hoped to get into the easterly wind on the north of this depression, but after he had sailed, the depression moved eastwards, and off the islands of Scotland he found a northerly wind blowing on his starboard beam. By Tuesday evening he had got out of the influence of this "low" and had met light, but westerly, winds to the north of the anti-cyclone centred on the Azores. His ground speed increased at once to 60 m.p.h. made good. At present there seems little hope of R 100 getting any direct help from the winds between the British Isles and Newfoundland. She has been twisting and doubling like a hare to find the least unfavourable route, and by doing so has doubtless saved fuel. Her weather information seems to be very good, and her navigation to have shown a fine grasp of the situation. Success in such conditions will be very creditable to her captain, her navigator, and her wireless officer.

□ □ □ □



**A DE HAVILLAND "PUSS MOTH" FOR THE PRINCE OF WALES:** This machine, recently finished, is painted in the Guards' colours—red and blue—and may be recognised from the identification letters G-ABBS.

A photograph of the cabin of this machine will be found on page 867.

(FLIGHT Photo.)



# INTERNATIONAL TOURING COMPETITION

## British Competitors Doing Well in Circuit of Europe

THE International Touring Competition has progressed steadily during the past week, and many of the competitors have already reached their final goal at Berlin. The weather has, on the whole, been very bad, and an order was issued at Vienna on Monday prohibiting the machines from going on to Prague, and was not rescinded until the evening.

Throughout the week England has held the lead, and on Sunday the first three to arrive at Berlin were Mr. Alan Butler, Capt. Broad and Mr. Thorn; Mr. Andrews followed a very little later after five other competitors so that all four Englishmen were home in the first nine machines. It is as well to stress again that this competition is not a race. Our daily papers have, during the week, had a lot of splash headlines about the "Great Round-Europe Air Race," which has led people to suppose that the fact of Mr. Butler and Capt. Broad being ahead most of the way means that we shall win the whole competition. This is, of course, not so, and only proves that British engines can stand up to a great deal of full-throttle work and that for the same capacity our machines are somewhat faster than the majority of our foreign competitors. The latest news, though unconfirmed, states that Capt. Broad and Mr. Butler are the only two competitors to be awarded the full amount of marks for speed. It looked as if Mr. Thorn would also have gained this distinction, but evidently he has been delayed and consequently has lost 20 marks. This does not mean that this is necessarily due to engine trouble, and, in fact, is most likely due to other causes. However, it is a pity, as had he gained the full amount we should have been able to claim this honour for both of our most well-known engines and machines.

Another unfortunate circumstance is the probable disqualification of Mr. Butler. He did not elect to carry a spare propeller, and so when he broke his in landing on soft

ground at Posen he fitted a new one which automatically disqualified him. This is doubly regrettable after his effort in gaining full marks for the speed part of the competition.

Two further accidents have marred the competition generally. On Friday, July 25, there was fog at Lausanne, and Capt. Henri Stub fired some fuses in an endeavour to guide the incoming machines. One of these unfortunately exploded and mortally wounded him.

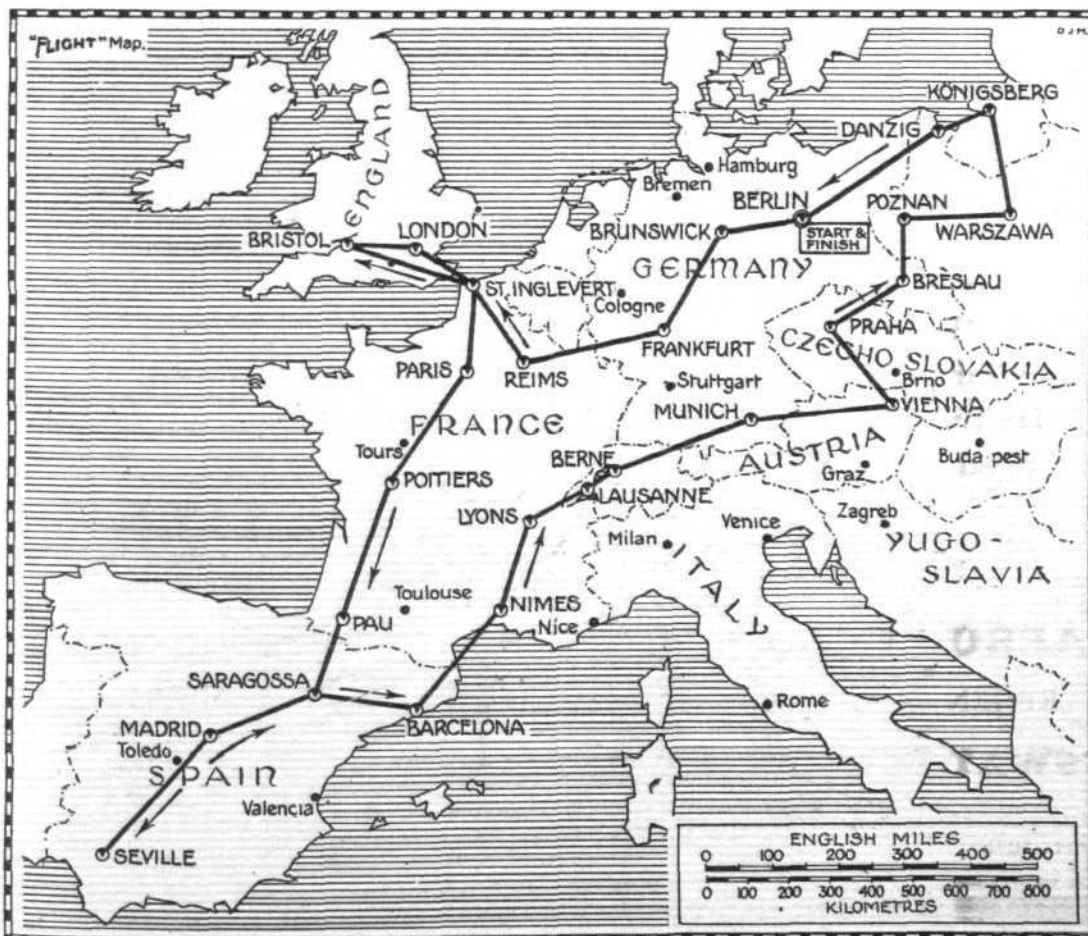
The other accident occurred when Herr Offerman, with his passenger, was bringing his B.F.W. in at Lyon on Saturday, July 26. He hit the wireless aerial, and both he and his passenger were killed.

Herr Neininger and his passenger escaped when their Darmstadt D.18 forced landed in the Gulf of Lyons, as they were picked up by a French steamer.

Full and accurate news is not yet available, but hereafter we give a brief summary in diary form of the chief happenings of each day.

On July 22 Mr. Butler was the first to arrive in Spain when he landed at Getafe at 4.35 p.m. (B.S.T.), followed by M. Finat and Arrachart an hour later, and Mr. Thorn at 6.30.

On Wednesday, 23rd, Mr. Butler again created records. He left Madrid (Getafe) at 7.1 a.m., was in Seville at 9.13, spent 42 min. there, and arrived in Madrid again at 11.57. He left again at noon and landed at Barcelona at 4.22 p.m. He was closely followed all the way by Mr. Thorn, who arrived at 5.25 p.m. At this point 12 pilots had arrived from Saragossa; 12 reached Seville; 11 returned from Seville; 7 went on to Saragossa; and 5 proceeded further to Barcelona. Of these five, three were English, namely, Capt. Broad, Mr. Butler and Mr. Thorn. Mr. Andrews, on the Spartan, was among those who arrived at Madrid on his way south. 53 of the 60 competitors had passed through Heston.



THE CIRCUIT OF EUROPE: Sketch map of route, showing compulsory stops. The total distance was 4,700 miles.



Some of the first arrivals at Berlin in the Touring Competition. Left to right, Dr. Pasewaldt (Arado-Argus), Herr Morzik (B.F.W.-Argus), Mr. Thorn's passenger, Capt. Broad (Moth-Gypsy II), Mr. Thorn (Avian-Hermes), Mr. Butler (Moth-Gipsy II), Herr Poss (Klemm-Argus).

On Thursday, July 24, Mr. Butler, Mr. Thorn and Capt. Broad were still ahead, and they landed at Vienna shortly after noon. The weather from Spain was reported as exceptionally bad. Mr. Carberry, in his American Mono Special, was among those who arrived at Lausanne, with Mr. Andrews not far behind him. Several of the machines had been held up at Madrid owing to the weather, but most of these got away during the day. M. Plessis, in a Caudron, was reported to have retired. Among those who arrived at Madrid were Pasewaldt (Arado), Spengler (Klemm), Finat (Caudron), and Arrachart (Caudron).

On Friday, July 25, the leading three all arrived at Breslau as did Herr Poss (Klemm), who is the leading German. Herr Morzik got to Prague one stage behind this. A German, a Frenchman, and a Spanish machine reached Vienna. Mr. Carberry, with a German and a Frenchman, reached Munich, and Mr. Andrews got to Berne. 35 machines were held up for two days at Pau as the weather was considered to prohibit flying. The original time limit for the return to Berlin was 4 p.m. on July 31, but this has now been extended 48 hours owing to the delay at Pau, for those detained there that length of time and for 24 hours for those who arrived later.

Among those who left Munich for Vienna were the

Archduke Antonio Hapsburg-Bourbon, M. Arrachart, M. Finat, Herr Polte, and Mr. Carberry.

On Sunday, July 27, Mr. Butler and Capt. Broad arrived at Berlin at 4.33 p.m. and were followed shortly afterwards by Mr. Thorn, Herr Poss, Herr Morzik, M. Finat, Herr Pasewaldt, the Archduke Antonio Hapsburg-Bourbon and Mr. Andrews. There were 42 machines officially reported on the route between Madrid and Berlin. Nine machines are definitely out of the competition. Lady Bailey, Miss Spooner, five German competitors, and two Poles spent the night at Posen.

On Monday, July 28, 16 competitors had arrived at Berlin, including Lady Bailey, Miss Spooner and Mr. Carberry, which left 35 still to come, as 9 had retired. A certain number of marks so far awarded have been published, and these are Capt. Broad, 270; Herr Poss, 264; Herr Morzik and Mr. Carberry, 263 each; Herr Polte, 262; and Mr. Thorn, 250. Gipsy engines appear to have done exceptionally well as Capt. Broad has run at 2,250 r.p.m. all the way, while the engine in the Spartan flown by Mr. Andrews has now done 50 hr. at full throttle, as this is the same machine he flew in the King's Cup race. The Hermes in Mr. Thorn's Avian must have also been full-cut most of the way for him to keep the speed he has done.



"GENETS" IN LOW-WING MONOPLANES: On the left, a Junkers "Junior," and on the right a PWS 51 (Polish) Machine. (FLIGHT Photos.)



## COMPETITORS ANALYSED

WITH so many machines competing it is no easy matter to form a clear picture of how many types are represented, the engines with which they are fitted, and so forth. Below we give, in a form which seems to "tell the story" concisely, an analytical list of the 60 machines which started from Berlin. The first column gives the number of types of each nationality. The second shows the type names, and how many of them taking part. In the third are found the engines with which the types are fitted; and finally, the last column gives the Competition numbers. For example, of the German aircraft types there are 11 BFW machines, of which six are fitted with Argus engines, four with Siemens, and one with BMW X.

## GERMAN

Aircraft Type	Engine	Competition Numbers
7 Types 11 BFW M.23 ..	6 Argus AS 8 ..	B3, C3, C6, C7, E8, E9
	4 Siemens ..	C4, C5, F1, F2
	1 BMW X ..	D8
	4 Argus AS 8 ..	A2, B8, B9, C1
	2 Genet ..	D5, E1
	1 Siemens ..	E6
	1 Salmson ..	B7
7 Types 9 Klemm ..	1 BMW X ..	D7
	4 Argus AS 8 ..	B4, C8, C9, D1
	2 Genet ..	A8, A9
7 Types 3 Junkers "Junior" ..	1 Siemens ..	E2
	1 Albatros L.100 ..	D2
7 Types 1 Albatros L.101 ..	1 Argus AS 8 ..	B5
	1 Darmstadt D.18 ..	D4
30 Machines		

## POLISH

7 Types 3 RWD 2 ..	3 Salmson ..	P3, P4, P5
	3 Hermes ..	O9, P1, P2
	2 PZ L5 ..	O1, O2
	1 PWS 8 ..	O5
	1 PWS 50 ..	O6
	1 WS 51 ..	O7
	1 PWS 52 ..	O8
12 Machines		

## ENGLISH

4 Types 4 Moth ..	4 Gipsy ..	K3, K5, K6, K8
	1 Avian ..	K1
	1 Spartan Arrow ..	K4
	1 Monocoupe ..	K7
7 Machines		

## FRENCH

4 Types 3 Caudron 193 ..	3 Renault ..	L3, M1, M2
	1 Renault ..	M6
	1 St. Hubert ..	L2
	1 Mauboussin ..	L1
6 Machines		

## SPANISH

2 Types 2 Moth ..	2 Gipsy ..	T5, T7
	1 C.A.S.A. ..	T1
3 Machines		

## SWISS

2 Types 1 Breda ..	1 Walter ..	S1
	1 Klemm ..	S2
2 Machines		

## Engines in the Competition

German.—Argus AS 8, 17; Siemens, 6; BMW X, 2. Total, 25.

English.—Gipsy, 11; Genet, 6; Hermes, 4; Cirrus, 1. Total, 22.

French.—Salmson, 5; Renault, 4. Total, 9.

Czech.—Walter, 3. Total, 3.

American.—Warner Scarab, 1. Total, 1.

## THE AWARD OF POINTS

SO much confusion appears to exist in people's mind concerning the basis upon which the award of points will be made in the International Touring Competition that, although a summary of the system adopted was published in FLIGHT of February 21, 1930 (as soon as the regulations were issued) it is thought that some notes on the subject may be of assistance in the present issue, at a time when the first part of the competition, the Circuit of Europe, has been completed and the second part, the technical tests and assessment of "practical qualities," are just beginning.

*The Circuit of Europe.*—At the start of this circuit, one of 4,700 miles, each competitor was credited with 75 points. It was a rule that a competitor must spend each night in an official control (see Map). For the first night spent outside a control (arrival after the official "closing time" counted as a night spent outside) a competitor was mulcted 15 points. For a second night spent outside a control he was mulcted 30 points, i.e., 45 points in all. A third failure to reach a control meant disqualification. Thus a competitor who did not miss a single night in a control had the full 75 points to his credit. A competitor who spent one night "outside" retained 60 points. A competitor who spent two nights outside a control retained 30 points in the award for regularity.

From the accounts in the general press one would imagine that the Circuit of Europe was a race. This was, of course, not the case. Points were to be gained for speed, according to the following system (we are confining ourselves to machines of the first group, with a tare weight of not more than 400 kg. plus an allowance of 15 per cent.): Between 90 and 135 km./h., 3 points per km./h.; between 135 and 155 km./h., 2 points per km./h.; between 155 and 175 km./h., 1 point per km./h. Thus a machine which averaged 175 km./h. around the Circuit of Europe would receive the full 195 points, i.e., 135 points for the first group of speeds, 40 points for the second group of speeds, and 20 points for the last group of speeds. To this extent, therefore, speed in the Circuit of Europe was of importance, but no points were awarded for speeds higher than 175 km./h. (108.7 m.p.h.).

The average speed was judged on flying time. Competitors had to have their log books signed as soon after landing as possible, and the official representative of the Aero Club in question putting down the exact time of signing. Similarly before starting from a control a competitor had to get the log book signed by an official, who put down the exact time of signing. The time spent in controls was of no importance unless the delay was so long as to prevent a competitor from reaching Berlin before the official closing time for the Circuit of Europe. All the log books have now to be examined, and the average speed of all the competitors worked out from the flying times shown by the times of arrival and departure in the log books. This will necessarily take some time, and the official results will probably not be known for several days.

## "Practical Qualities"

On their return to Berlin the competing machines will be examined, not only to see that no seals are broken, but also to be judged for what are termed "practical qualities." For these a maximum of 140 points will be awarded, as follows:—

42 points for comfort (side-by-side seating, telephone, cabin, luggage space, etc.).

15 points for undercarriage design (split type, brakes, etc.).

12 points for engine starting (means of starting, and time taken to start).

6 points for fire prevention (extinguishers, etc.).

6 points for dual control.

15 points for instruments (placing, special instruments such as turn indicators, etc.).

14 points for life-saving appliances (life belts, parachutes, etc.).

30 points for erecting and dismantling (folding and spreading the wings, go through door, make flight. Also for metal covering).

## Technical Tests

The technical tests will consist of take-off and alighting tests, for which a maximum of 60 points will be awarded, and of a fuel consumption test in which the maximum number of points to be awarded will be 30.

The take-off test consists in taking off, from standing start, over an obstruction. The machine must be placed at a distance not exceeding 400 m. from the obstacle (which is 8 m. high), and clear it with the shortest possible run, and in

the shortest possible time. That is to say, both distance run and time taken are taken into account, as is also the wind velocity at the time of the test. The latter is, of course, incorporated in the rules in order to even up any unfairness due to one competitor taking off in a calm and another against a strong wind.

The system used sounds a little complicated, but in reality is not so, and is certainly very sound in principle. If the horizontal distance run by a machine is  $l$  metres, and the time taken, from the wheels begin to turn and until they are over the obstacle, is  $t$  seconds, while the measured wind velocity at the time is  $v$  metres per second, the competitor will be credited with a take-off of  $l + t \times v$ . Substituting figures (we are not bothering about whether these figures are possible or not), if a machine starts 300 metres from the obstacle, takes 40 seconds to clear it, and the wind at the time is 5 metres per second, the competitor will be credited with a take-off of  $300 + 40 \times 5 = 500$ . This figure, which one may describe as the take-off figure, does not represent metres or seconds, but a product of metres and seconds. A machine with the same take-off distance and time, but which takes off in a flat calm, would receive a take-off figure  $300 + 40 \times 0 = 300$ .

Most people would have been content with this basis, but not so our friends the Germans, who are nothing if not thorough. In order to provide an even finer subdivision, the take-off figure obtained as outlined above does not, in itself, form the basis of the award of points.

What happens is this: The competitor who gets the lowest value of take-off figure, as defined above, receives 30 points, and the other competitors are awarded fewer points according to the amount by which their take-off figure exceeds the best man's. We have examined carefully the text of the French, German and English version of the regulations, and it appears to us that all three are wrong when referring to the system of awarding points to competitors other than the best. In all three languages the regulations say that competitors other than the best will receive:—

"1 point less per full  $3\frac{1}{2}$  metre distance for a difference of 1 to 30 metres; 1 point less per full 5 metres for a difference of 21 to 90 metres, and 1 point less per full 10 metres for a difference of 91 to 180 metres." The use of the expression "metres" seems irrational, as take-off has been defined as distance augmented by time multiplied by wind velocity. There is no need to assign to the figures any dimension, but if one does, surely "metre-seconds" would be better.

Again, the regulations state "No points will be awarded for take-off distance exceeding 400 metres." Yet earlier in the regulations it is stated that aircraft must be placed at a distance from the obstacle *not exceeding 400 metres*, and in calculating the take-off figure this distance is increased by the product of the time and the wind velocity. So that a machine starting 399 metres from the obstacle would be

disqualified unless it took off in no wind and spent no time getting from the point of start to the top of the obstacle.

However, to return to the actual classification, if the "best man" takes a horizontal distance of 200 metres, and a time of 30 seconds, in 1 m/s wind, his take-off figure will be 230. Another competitor, whose horizontal distance is 250 metres, and whose time is 35 seconds in a wind of 2 metres per second, would have a take-off figure of  $250 + 35 \times 2 = 320$ . This would represent a difference of 90 (not metres, but, if one likes, "metre-seconds"). This last competitor would then; according to the rules, be awarded 9 points + 12 points = 21 points less, or 9 points.

It is conceivable, although not, perhaps, very likely that a machine may be so good in this particular respect of take-off that the other competitors will receive very few points indeed in the take-off tests.

The alighting test is to all intents and purposes the take-off test reversed. The machines have to come in over the obstacle, and pull up in the shortest possible space and time. Brakes (wheel and air) are permitted.

### Fuel Consumption

The fuel consumption test will be carried out over a closed circuit of approximately 300 km. The fuel will be supplied to competitors by the organisers, free of charge, and will be of ordinary commercial quality, of specific gravity 0.720/0.730. A maximum award of 30 points will be made in this test, on the following basis: Machines whose consumption exceeds 16 kg. per 100 km. will receive no points. For machines whose consumption does not exceed this figure 10 points will be awarded. For every 250 grammes less than this quantity one point will be awarded. Maximum 20 points. As 16 kg. per 100 km. corresponds to 5.66 lb. per 10 miles, or, roughly, 12½ miles per gallon, few competitors should fail to score at least the 10 points in this test.

### Allocation of Points

The following maximum points will be awarded under the different groups in the International Touring Competition:—

1. Regularity in Circuit of Europe .. ..	75
2. Average speed over Circuit of Europe .. ..	195
3. "Practical qualities" .. ..	140
4. Take-off and landing .. ..	60
5. Fuel consumption .. ..	30

Total .. .. 500

### Classification of Machines

Of the 60 machines which started from Berlin 40 were in Class I (tare weight, 400 kg. plus 15 per cent.), and 20 in Class II (tare weight, 280 kg. plus 15 per cent.).

The competition numbers of the 20 machines in the lighter class are: B3, B7, B8, B9, C1, C3, C4, C5, C6, C7, D7, D8, E8, E9, F1, F2, L1, P3, P4, P5.

### Captain Barnard's Malta Flight

AN attempt to halve the existing air record between England and Malta has been arranged by Messrs. Lewis and Barnard, Ltd. and Arens Controls, Ltd. Captain C. D. Barnard is to make the attempt, probably to-day or

Saturday. Flying solo, Captain Barnard will leave Lympne Aerodrome at dawn and keep a compass course for Genoa, after which the route will be Naples-Syracuse-Malta. He expects to reach Halfa Aerodrome, Malta, at about 8 p.m.—fourteen hours after leaving Lympne. He is carrying with him letters from the Right Hon. J. H. Thomas, M.P., and Air Marshal Sir Sefton Brancker to Lord Strickland. Then, after three or four hours' sleep, he will take off again from Halfa Aerodrome for Croydon at dawn. Actually Captain Barnard will be trying to beat his own record. In 1922 he flew to Malta from England in two days, and was the first pilot to land on the then newly-constructed aerodrome at Halfa. This still remains the record, but Captain Barnard is determined to cut it down by at least half. He will be flying in Mr. Roy Faulkner's De Havilland "Puss Moth"—a machine of standard type which has a cruising speed of 110 m.p.h. It is, however, fitted with Arens Controls and an extra petrol tank in the fuselage.



Capt. C. D. Barnard and the D.H. "Puss Moth" on which he is attempting a flight from England to Malta in 14 hours.



## A LOUD LOUD SPEAKER

### The Siemens-Schuckert Mobile Equipment for Aerodrome Use

WE often wonder how many visitors to the ever-increasing number of flying meetings, displays and air pageants realise the numerous problems and technicalities that lie behind those loud speakers which announce the proceedings or fill up the gaps with sweet (sometimes) music? There are some occasions, perhaps, when better results might be obtained with the Megaphone Man of Ye Old Hendonian

speaker motor vans, and were given a demonstration of its powers.

This van is entirely self-contained, and not only contains the necessary power-plant and gear for operating the loud speaker equipment, but also a "padded cell" for the announcer, complete with microphone and gramophone—while a wireless receiver is also installed so that messages or broad-



**BROADCASTING BROADCAST:** Three of the mobile Siemens-Schuckert Super Loud Speaker vans. Each van has a powerful and entirely self-contained equipment. Below, one of the loud-speaker units.

days (who once, we remember, told us that "Mr. B. C. Hucks was giving an exhibition flight on a 50-h.p. Gnome engine"!)

However, the equipment of a loud speaker gear at a flying meeting *does* present many problems, especially nowadays, when the area of "listeners" is somewhat extensive. In such a case, it is not merely a question of obtaining sufficient volume to cover all parts—which is not particularly difficult to accomplish—but the tone *quality* produced must essentially be of the best, especially as regards speech, where flying times, names, etc., should "come over" clearly and without distortion.

On several occasions in the past we have experienced a little difficulty in hearing the announcement distinctly, although the *volume* was there and the announcer was blameless. When comparatively small areas are covered, little fault is to be found with the modern equipment; it is when the enclosures are very extensive that the trouble begins. A large number of loud speakers distributed over the area does not always solve the difficulty—in fact, at certain points the "doubling" or echo effect is even more distracting.

We do not pretend to be specialists in this particular branch of electrical engineering, but we understand that the main difficulty presenting itself (apart from acoustic problems) up to now has been that the output demands have exceeded the capacity of the equipment available—particularly in the case of the battery "driven" gear. Thus, just recently attention has been directed towards the "power-driven" equipment, which, coupled with the advance made with loud speaker design, has resulted in vast improvements.

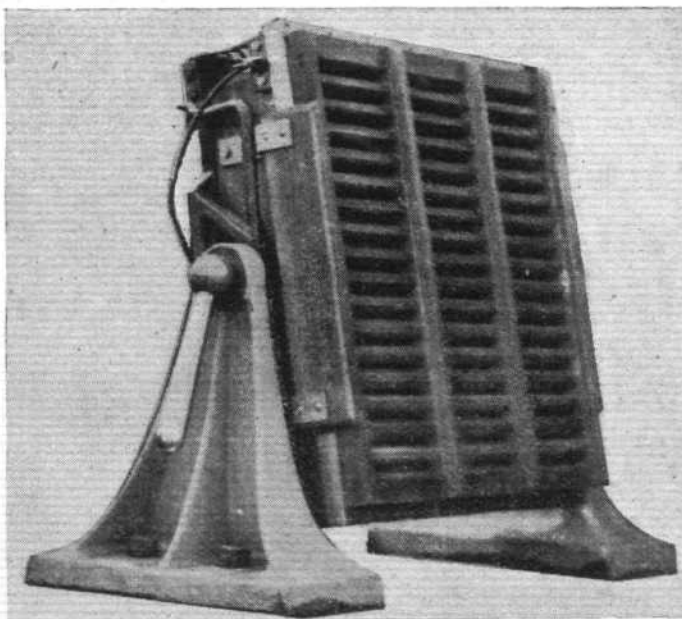
Siemens-Schuckert (Great Britain), Ltd.—a name well known in the electrical world—are one of the firms who have been developing a loud speaker equipment along these lines, and they have achieved really remarkable success. A few days ago we were able to inspect one of their loud-

cast programmes can be "delivered" as well. The complete equipment can, therefore, rapidly be transported to any destination, and put into operation almost immediately on arrival. These vans may be hired for any function and dispatched to their destination at a moment's notice.

The Siemens "Super" loud speaker is designed on the electro-dynamic principle, the sound waves being received by a microphone, then passed on to the main amplifier, thence to the terminal and additional amplifier, which amplify the phonetic effect. The phonetic energy is then passed on from the additional amplifiers to the loud speaker or speakers. One loud speaker is mounted on the van, while additional speakers can be disposed at suitable points.

Power is generated from a special motor set, consisting, in the case of the portable van, of the petrol motor that also drives the van, a high tension generator, and a dynamo for generating the exciting current for the different loud-speakers.

As regards the actual working of the Siemens Super Loud Speaker equipment, we must say that the volume, range and quality of both speech and music were most remarkable, and about the best we have yet heard. With the one van speaker in operation music and speech came through without



a trace of that unpleasant distortion sometimes experienced, even at close quarters—although the volume of sound was tremendous. But what impressed us most was the range obtained without loss of clearness or quality of tone. Actually, these speakers can be heard quite distinctly at distances of one mile or more! Another important feature is that the sound is uniformly distributed through very nearly a full 180° in front of the speaker.

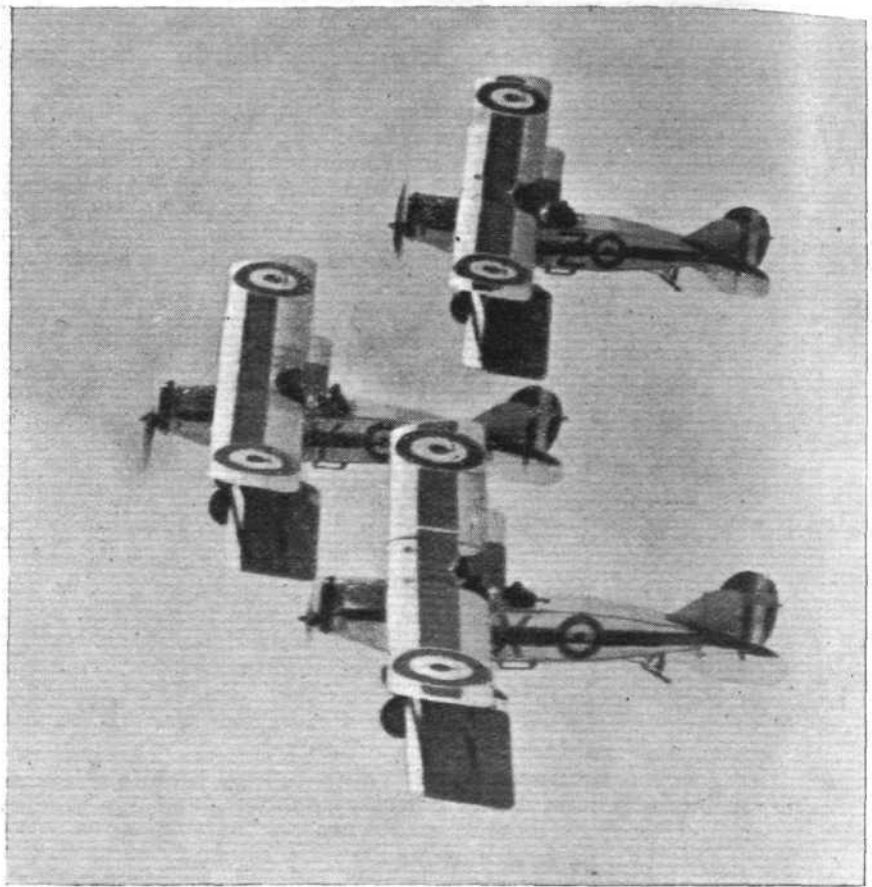
There are very many other features, but space will not permit further comment here, but any of our readers who may be interested and require further particulars can obtain these from Siemens-Schuckert (Great Britain), Ltd., 22, Betterton Street, Drury Lane, W.C.2.

# OXFORD UNIVERSITY AIR SQUADRON

## Annual Camp at Manston

**O**XFORD University Air Squadron had just started the third course of their annual attachment at Manston aerodrome when representatives of *FLIGHT* were invited to visit them on Thursday, July 24. It was a gloomy day of intermittent rain squalls, which did not make flying impossible, but was most unsuitable for landing practice, which was what the 25 members in the last course chiefly needed. All of them, as well as all the 50 who had attended the previous two courses, had done three hours' solo, and were quite capable pilots in the air. All that they needed was more practice in landings. The first two courses had enjoyed very good weather at Manston in their respective fortnights, and the third course were particularly unlucky to strike the series of depressions from the Atlantic which have made the latter part of this July most unsummerlike.

The flying abilities of this present O.U.A.S. are quite remarkable. In the present year one member had to resign because he was working hard for an examination, and another was found lacking in eye balance and could not judge his landings. All the remainder have done three hours' solo. This is all the more remarkable because just on the eve of going to Manston some members had to resign from the squadron, so their places were filled from the waiting list. Of the new members five had never flown at all before. Yet in the fortnight at camp all qualified for solo flying and achieved their three hours of solo flight. This is a very striking result, and shows what can be accomplished by really good instructors working on the right sort of material. At present, 22 members of the squadron belong to the R.A.F. Reserve of Officers, but the extraordinary progress made by the new members gives some idea of the numbers of Oxford men who could rapidly be turned into pilots in an emergency. The Air Ministry's policy of providing a channel by which Uni-



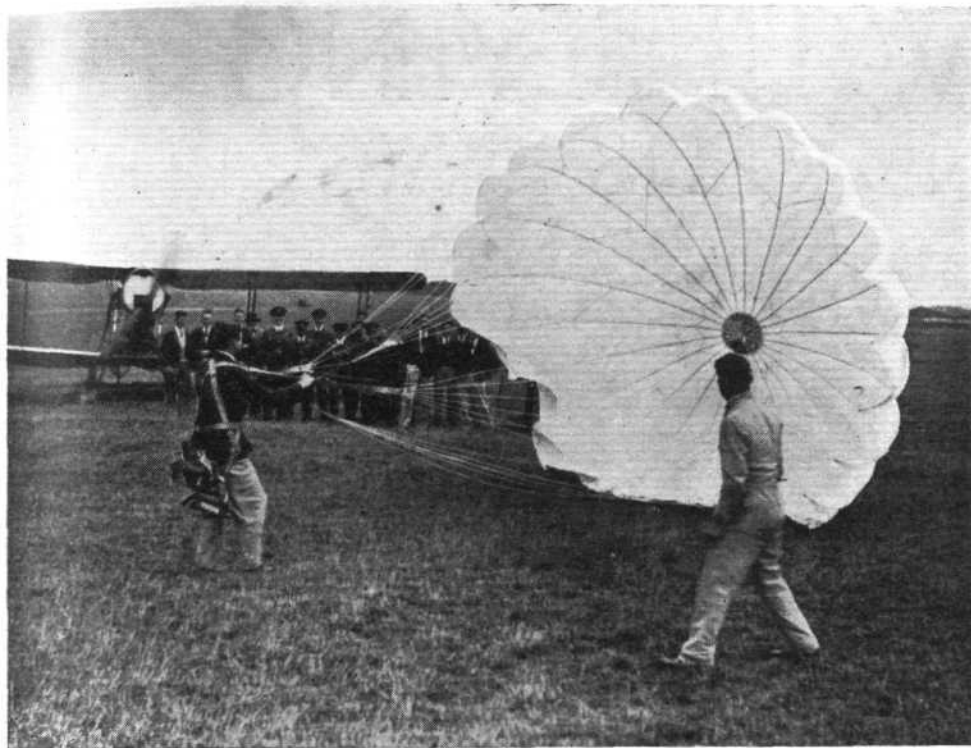
A Formation of "Bristol Fighters" of the O.U.A.S. Note the dark blue bands. (FLIGHT Photo.)

versity men can get into the air and into the air services has already been shown to be a policy of wisdom. Oxford has not yet realised quite so clearly as it might have done the attractions and advantages of a career in the permanent Royal Air Force, though there is at present in camp at Manston one candidate for a degree and a University commission in the person of A. R. H. Edwards, whose rowing at No. 5 in the last Oxford crew evoked the highest praise from the rowing critics. His elder brother, also a rowing Blue, is already an officer in the R.A.F. In these days, when attractive careers are hard to find (the I.C.S., for example, is probably not quite the same goal of the ambitions of every Oxford "Greats" man which it was when the present writer was up), it is strange that more Oxford men do not



O.U.A.S. Names from left to right:—Front row: T. F. Owen, S. H. R. Clarke, F.-Sergt. Freeman, F.O. P. H. Smith, F.O. G. A. V. Tyson, Flight-Lieut. F. J. W. Mellersh, A.F.C., Wing-Comdr. A. G. R. Garrod, M.C., D.F.C., Flight-Lieut. C. Guppy, F.O. E. J. George, F.O. A. E. Dark, F.O. J. W. Duggan, W. A. Welch, A. M. Emmet. Back row: F.-Sergt. Kelly, Sgt. Devson, J. K. W. Alexander, J. H. Lavery, E. A. M. Norie, G. G. Davies, J. W. G. Birkbeck, W. B. Thompson, D. B. Smith, T. F. Bird, T. H. A. Llewellyn, J. M. D. Kerr, R. C. Richards, R. Hobbins, J. M. Freeman, R. L. Charlesworth, H. G. Lafleur, B. C. Sharp, C. H. Carter, G. M. T. Kerr, J. F. Platts Mills, R. C. Reynell, P. K. George. (FLIGHT Photo.)





A Tug-of-War. The parachute has not come down but thinks it could go up.  
(FLIGHT Photo.)

apply for R.A.F. commissions. The service would certainly be all the better for a rather larger Oxford leaven. Still, a commission in the Reserve is a thing to respect. In the next war, the quality as well as the quantity of the R.A.F.O. may well be of vital importance at a most critical time.

To return to the present camp at Manston. Last year, the 50 members who made up the first two courses put in 732 hours in the air. This year, despite worse weather, the flying time for the first two courses was 878 hours, and 193 hours were flown on the service type, the "Bristol Fighter," as against the training type, the "Lynx-Avro." The normal equipment at Upper Heyford is four Avros and two Bristols, and at Manston the number of machines is temporarily doubled. The squadron's machines have dark blue bands painted on the top planes and down each side of the fuselage. At Upper Heyford, four instructors are available, namely, the Chief Instructor of the O.U.A.S., Wing Commander A. G. R. Garrod, M.C., D.F.C., M.A. (Oxon), and the instructor (the title which serves as camouflage for the adjutant), Flight-Lieut. C. Guppy, as well as the two officers of the Upper Heyford station flight, Flight-Lieut. F. J. W. Mellersh, A.F.C. (who was a pilot in Capt. Roy Brown's flight of No. 209 Squadron in 1918, and saw Brown shoot down the great Baron von Richthofen), and Flying-Officer G. A. V. Tyson. During the attachment at Manston, three other officers are attached for duty to the squadron.

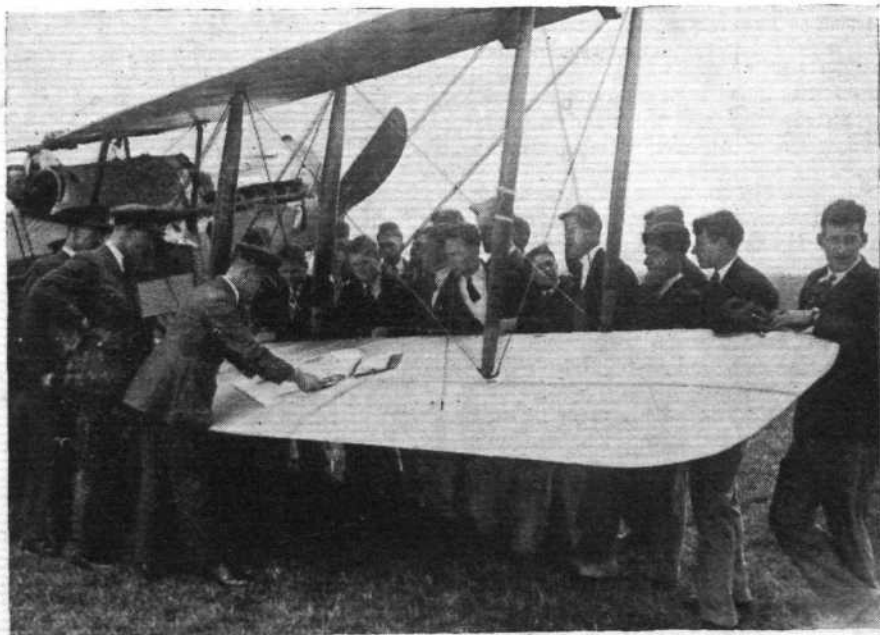
The Oxford squadron does not live under canvas at Manston, and during the recent bad weather the men must have been very thankful that they are provided with officers' quarters. Their uniform consists of grey flannel trousers and the squadron's dark

blue blazer and tie. Very nearly all the colleges are represented in the squadron, Christ Church showing a slight preponderance, but this is apt to vary year by year. Last year, Christ Church and New College each had nine men in the squadron; Trinity and Magdalen, six; Exeter and University, five; B.N.C., Keble, Oriel, Queen's, St. John's, and Wadham, four each.

Cross-country flying is, of course, a great feature of the training. The easiest flights are taken first, namely, to Eastchurch and Hawkinge. The next stage includes Hornchurch, North Weald, and Northolt. Longer flights are to Martlesham, Tangmere, Duxford, Henlow, Worthy Down, and Andover, while the longest flights of all are to Netheravon and Old Sarum. At the last-named aerodrome the Oxford pilots visit their friendly rivals of the Cambridge squadron. The visit to Martlesham is particularly interesting, because while one party flies there in the squadron's own aeroplanes, another party is taken up to Felixstowe in flying-boats. On the return trip the two parties change over, and thus all get some idea of flying-boat work.

Everyone connected with the O.U.A.S. will be sorry to hear that Wing-Commander Garrod's term as Chief Instructor is nearly over. He has done great work for his University in the air, and his place will be hard to fill. There are some other Oxford men of appropriate rank in the R.A.F., but not too many. We can only hope that whoever is chosen as successor will show the same "live wire" qualities which Wing-Commander Garrod has displayed at a critical period of the squadron's history.

F. A. DE V. R.



Instruction in Map Reading. (FLIGHT Photo.)

#### Prince of Wales Flies to Brussels

On July 29 the Prince of Wales flew from Hendon to Evere aerodrome in order to visit the Antwerp and Liège Exhibitions. The Prince's machine—a Service one—was piloted by Sqdn.-Ldr. Don and was escorted by two others, one of which carried the Prince's private secretary, Sir Godfrey Thomas. They landed, just before 5 p.m., in heavy rain, after a flight of about two hours. The Prince was met by the King and Queen of the Belgians, and later drove with

them to the Palace of Lacken; in the evening he was entertained at a banquet by the King and Queen.

#### Death of Two American Pioneers

It is with regret that we have to record the death of two American aviation pioneers, Glenn H. Curtiss—who, as reported last week, only recently received University Honours—and Chance M. Vought. Both were contemporary designers of well-known and successful aircraft bearing their names.

# PRIVATE FLYING AND CLUB NEWS

9331



## NORWICH

**T**HE Norfolk and Norwich Aero Club got through their third annual meeting at Mousehold Aerodrome very creditably on Saturday, July 26.

It was one of those fairly quiet meetings where visitors are well looked after without being fussed over, and where people are made to feel at home without being made to feel that they cannot largely do what they wish to do. Coming as it did on the heels of the Ipswich meeting the management had to combat a certain amount of ill-feeling against meetings in the Eastern Counties, and we believe they succeeded; at any rate, as far as the visiting pilots were concerned, there was no cause to complain of their welcome and treatment, though this may not, perhaps, be said of all other classes of visitors. It is really astonishing that those running these shows in some cases still fail to realise that to popularise their club and flying in general they cannot adopt the high-handed attitude like the Manchester City Fathers, and say "there's the type of entertainment we consider suitable for you; now sit down and watch it thankfully." To run an air meeting successfully it must be very largely arranged so that the visiting pilots, the press, and even, to a certain extent, the general spectators all play their part. By this we do not mean that they should be definitely allotted



The betoppered "bottle-necker" shelters from the wrath of the Mexican Chief. (FLIGHT Photo.)

## MEETING

tasks, but things should be so arranged that the visitors feel that the success of the meeting depends as much upon them as on anybody, instead of, as is often the case, made to feel that they are entirely redundant, and that the whole show is merely for the amusement of myriads of unnecessary officials, all of whom vie with each other in treading on people's toes.

The Press are also often considered a necessary evil, instead of very human beings who can do a lot toward the success of each particular show and of future shows if they are looked after and given the help and information they require. At one recent meeting, a representative of the Daily Press, whom, as those in aviation know are generally cub reporters with a most meagre knowledge of matters aeronautical, asked a labelled official to tell him what the machines were which had at that moment arrived as escort to a member of the Royal Family. The official, who evidently had a lot to learn before he would become of the slightest real use to his club retorted, "Oh! the Chinese Navy of course!" Now, such behaviour may be taken as being funny (especially the fact of pulling the leg of a mere journalist), but the result was that the paper represented, which was a prominent daily, had exactly four lines on that meeting, and since it

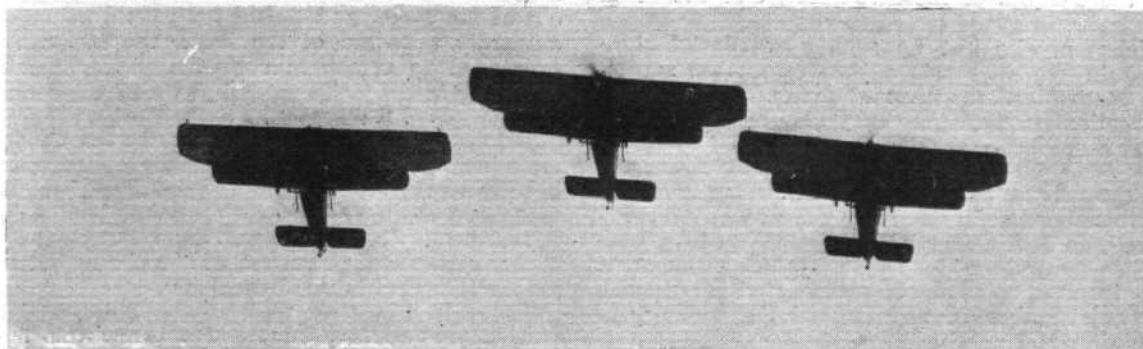


"Tommy" nefariously breaking his last bottle. (FLIGHT Photo.)



The "Spirits of Salts." There was no rush to accede to her request to stop her and try one. (FLIGHT Photo.)





One of the R.A.F. fighter flights half-way up a loop in formation. (FLIGHT Photo.)

was the opening of a municipal airport, it is a matter to be regretted by all of us who have the wellbeing of aviation at heart. We have often wondered why the more alive clubs have not found a journalist with a real knowledge of aviation to do their announcing and broadcasting for them. This vital matter is so often left to the most palpably incompetent member of the club, with the result that the crowd are generally treated to a series of staccato interjections, between the howls of out-of-date gramophone records, instead of which they might well have been educated and instructed in an interesting way which would have kept their attention on the show and served to bridge any unfortunate gaps in the programme and finally sent them home with a finer appreciation of the joys of flying, and far more likely to be as fed up as we are when our dailies follow up the report of each crash with a recapitulation of all crashes the last ten years or more! We do not suggest that all the announcing is bad; in fact, certain clubs have secured Mr. Will Hay, and those occasions were outstanding successes, but as a general rule this matter has been very much neglected!

The Norwich meeting started with a rally for the first pilot to cross the line after 12.30 a.m. according to the programme. We were, unfortunately, not there until 1.30 p.m. ourselves, and so did not see this event, and must therefore assume that Flt.-Lt. A. Scroggs, the winner, is a hearty advocate of early rising—or should it be late retiring in this case?

A novel feature was the first demonstration of a machine produced by a new aircraft factory at Norwich, the Kirkby Heath Robinson Co. The "Spirits of Salts," as she was christened, made valiant attempts to leave the ground, but without avail. This is perhaps not surprising, and no doubt

had Mr. J. D. North, of Boulton and Paul's, been consulted, he would have advised the removal of some of the conservatory doors, sundry pots of ferns, swinging wire baskets of flowers and the like, all of which must have caused a certain amount of interference. The fuselage bore a strange resemblance to a well known fighting aircraft, but naturally we cannot assume that such a design has been copied at all. It was even reminiscent of a glider flown by Sqd.-Ldr. Gray at Itford in 1922, and if asked for a new name for this machine, we might suggest Brimoranean.

At 2.30 p.m., our indefatigable Director of Civil Aviation, Sir Sefton Brancker, formally opened the meeting with a few well chosen words broadcast by those "horrid tin horns" as they are called by one of our contemporaries, and then there followed the first of a series of "turns," which No. 19 (Fighter) Squadron gave during the afternoon. A flight of three Siskins indulged in some aerobatics in formation and finished with the most beautifully executed "Prince of Wales' Feathers," it has ever been our luck to see.

Flt.-Lt. R. Atcherley then threw one of the Avro monoplanes (Hermes) about. This machine, combined with this pilot, appears to slow roll in a most easily controllable manner. It was unfortunate that Atcherley carried out so many of his manoeuvres in a corner of the aerodrome remote from the crowd; in fact, there was a general lack of showmanship on the part of all the pilots during the day. Later he repeated this error when he was giving a demonstration of crazy flying on one of the club Moths. F/O. W. Lindley gave quite a good show on a Siskin as an individual event, and then there was a race between a Bluebird, a Moth and an Avian. This was round a course



Flt.-Lt. Scroggs, the winner of the Rally, and F/O. E. Johnson, whose aerobatics were superb. (FLIGHT Photo.)



The machine park at Mousehold with the Avro Monoplane in the foreground. (FLIGHT Photo.)

just outside the confines of the aerodrome, and the Moth won.

F/O. E. Johnson, who put up such a wonderful show at Sywell, again repeated this with still further success on a special Moth fitted for inverted flying. He certainly made people realise how little they knew about flying, and his inverted loops were simply wonderful. He varied the usual form of the so-called outside loop by starting in the inverted position and then diving and looping and finishing inverted. We do not remember having seen this done at any display so far and shall, no doubt, shortly hear from American journals that it has never been done yet! Johnson also went through some inverted spins and spiral inverted dives which must surely be the supreme test of a pilot's capability of handling an aircraft.

The comic turn was nobly undertaken by that indefatigable friend of all those who want help of any kind at air meetings, to wit, Tommy Rose. On this occasion, he allowed himself to be dressed in a top hat and incarcerated in the "target" at which a Mexican Chief was to aim his fearful looking shot gun as he flew past. The bottles suspended from the sides of the target duly broke after each shot, until the last one,

which remained intact until our behatted hero broke his way out of the target and finished it with a hammer! For this dastardly exposure of the hoax, the Mexican landed and proceeded to attack him with a pistol, but Tommy had evidently learnt to fly as well as break the necks off bottles, so he raced our bellicose chief to the Moth and flew off rejoicing.

Before landing, he duly gave the impression that the ambulance would be required when he landed, but after several hair-raising episodes in front of the crowd—no lack of showmanship this time!—he went away and landed in a far corner in faultless style. It was well done, but on the whole it was a shock to see his prowess at "necking bottles," we had always thought him so abstemious.

Sqd.-Ldr. Rea then took up the Sidestrand and demonstrated that local product. He threw this large machine about in a manner which clearly showed one of the reasons, at any rate, why it has been adopted in the R.A.F. It was of course light, and therefore its climb was simply terrific.

Mr. Trantum was unable to do his drop with his Russell parachute as the clouds were low and the wind too strong.

Several further competitions were arranged for those visiting pilots who stayed over till the following morning.

**THE BENGAL FLYING CLUB.**—The club trained 14 pupils between January and June, bringing the number of *ab initio* "A" pilots to 34, of which 8 are Indians. Of these two purchased their own machines in May, and during May and June put in 92 hr. 15 min. flying. It is interesting to note that of the dual-instruction time Indians were responsible for 236 hr. 45 min. and for 95 hr. 30 min. of the solo flying time. The monthly times were:—

January, 143 hr. 25 min.; February, 152 hr.; March, 161 hr. 50 min.; April, 154 hr.; May, 168 hr. 45 min.; June, 168 hr. 45 min. Total, 948 hr. 45 min. Divided into 404 hr. 3 min. dual and 334 hr. 55 min. solo.

**BEDFORDSHIRE AERO CLUB** will be holding an air display on its temporary aerodrome at Goldington, 2 miles east of Bedford, immediately behind Goldington Church, on Saturday, August 30.

An interesting programme is being developed, which will open at 2 p.m., and flying will be in progress from noon.

Visitors arriving by air will be cordially welcomed, and are invited to take part in the competitions. There will be no charges for landing and housing. Visitors with aircraft who desire to stay in Bedford over the week-end are advised to bring their own picketing gear, as hangar accommodation will not be available. Hotel accommodation will be arranged for such visitors if a request is made to do so to the Hon. Secretary, Mr. C. Stelfox, "Winthorpe," 3, The Embankment, Bedford, enclosing a stamped addressed envelope if a reply is required.

This will be the opening meeting of the club, and is organised in conjunction with the Northampton Club, who will be giving the new club the benefit of their experience in the successful running of such shows.

The President of the club is P. M. Stewart, Esq., of 38a, Park Lane, London. He is the Chairman of The London Brick Company and Forders, Ltd., who have extensive works and brickfields in Bedfordshire, and the Chairman is Maj. H. E. C. Doyne-Ditmas, of Kempston Manor, Bedford.

**THE LONDON AEROPLANE CLUB** created a record for the Club with the flying time for May and June. During May 1,041 flights were made, totalling 436 hr. 20 min. while in June 1,074 flights, equalling 458 hr. 30 min. were flown. During the period 16 members qualified for their "A" licences.

The club wish all to note that they will be closed down for the staff holidays from August 1 to 19.

**CINQUE PORTS FLYING CLUB.**—The total flying times for week ending Saturday, July 19, was 21 hr. 40 min. Of this 7 hr. 30 min. were solo flying.

The August competition for the Ashwell-Cooke Challenge Cup has been postponed indefinitely owing to the presence during August of No. 601 Squadron A.A.F. at Lympne for annual training.

**THE BLACKPOOL CORPORATION** having provided a municipal aerodrome at Stanley Park, is now fostering a Blackpool Flying Club. A committee has been set up and the enrolment of members is making rapid progress.

Blackpool takes a long-sighted view of the future utility of its aerodrome. It visualises a time when learning to fly will be a popular holiday pastime, and it hopes to see Stanley Park established as one of the favourite resorts of aerial tourists. A clubhouse is being built at a cost of £9,000, and it will be one of the finest in the country.

The management of the aerodrome and the flying organisation of the club will be undertaken by National Flying Services, Ltd., who have been granted a seven years' lease of the aerodrome by the Corporation.

The Blackpool Flying Club will be the sixth to enter the National Flying Services group, and its members will be able to fly at the sister clubs at Hanworth (London), Leeds, Hull, Reading, and Nottingham. Members of these associated clubs will likewise have flying rights at Blackpool.

A Desoutter air taxi and a Cirrus Moth training machine have already been stationed at the aerodrome, and Capt. F. C. Crossley has been appointed chief instructor and pilot-in-charge of the aerodrome. More machines and a second instructor will be added as soon as they are required to meet the demands of members.

The Fairchild KR.21 (Genet Major) with a Townend Ring. A Canadian built private owner's machine.



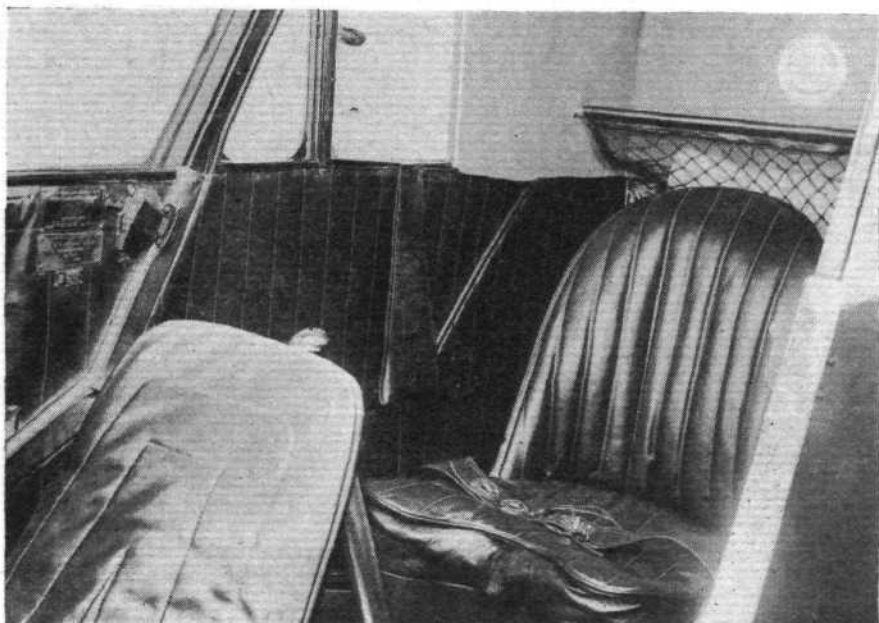


NATIONAL FLYING SERVICES announce that they will be holding a flying meeting at Nottingham on Saturday, September 13, and at Sherburn-in-Elmet on Sunday, September 14.

THE NEWCASTLE-UPON-TYNE AERO CLUB are holding an Air Fête and At Home at Cramlington Aerodrome on Saturday, August 30. The programme will consist of a cross-country race, an arrival competition, and other features.

Our photograph here shows the special interior fittings which have been incorporated in the Prince of Wales' new Puss Moth (Gipsy II). The cabin has a special finish and the rear seat has extra size and upholstery. This special seat can be removed and the normal one fitted when it is desired to use the third seat as well. Besides the seating arrangement the machine has an extra rear ventilator, dual control and a large luggage grid behind the rear seat. The complete machine is shown on page 856.

(FLIGHT Photo.)



THE BLUEBIRD manufacturers have found that the side-by-side seating has brought them an increasing number of sales, so that they have now been able to reduce their price by £200!

THE AVIAN being flown by Mr. Thorn in the Touring Competition is the same old machine which was flown both in this year's King's Cup Race and last year's race, so that the speed which he has averaged is a very creditable performance, especially as his Hermes engine has not been changed since the last race.

## CROYDON WEEKLY NOTES

ON Friday, July 24, we paid our respects to the memory of Col. Henderson. Whilst the funeral ceremony was taking place at Crockham Hill, Capt. Youell flew over in an Argosy and dipped in salute. After the cremation at Golders Green, the ashes were brought back to Croydon in a casket draped with a Union Jack, as befitted one who had had so distinguished a military career. They were transferred to a "Puss Moth" piloted by Flying Officer C. Allen, in which was also Sergeant Pilot Paine, late R.F.C., R.A.F., who served under Col. Henderson during the war. As the machine passed over the aerodrome, Sergeant Paine scattered the ashes to the winds. It was a most fitting and impressive ceremony, which deeply moved the watchers, his colleagues and friends who stood in respectful silence.

The funeral of Mr. C. B. Shearing took place at Tunbridge on the same day.

Two German long-distance fliers, Messrs. Wolff Hirth and Weiller passed through on Friday, bound for America, via the Faroe Islands, Iceland and Greenland. Their little Klemm looked a frail craft in which to attempt such a journey, but they left with our best wishes.

We heard a different opinion of such flights from van Dyk on his arrival back from the States on Monday. He declares that the greatest danger, even for a commercial pilot of long standing is not engine failure, but weariness. During the long hours in which he and Kingsford Smith flew through the Newfoundland fog banks, sleep kept attacking them, and they had the greatest difficulty in warding it off. As we prophesied last week, van Dyk is coming back to regular air line work, but he is more likely to be seen between Holland and the Dutch East Indies than at Croydon. He left again the same day by the 1 o'clock service to Holland, where a great reception had been arranged for him.

Another long-distance man at present here is Mr. Azuma, a Japanese airman, returning home. He flew from California, in his Whirlwind-engined Travel-Air, to New York, where he took boat to Southampton. From there he flew to Hanworth and on to Croydon. His route takes him across Germany and Siberia.

The flow of gold from the Bank of England to France has been rather rushing past us this week. Each day, large quantities have been shipped by Imperial Airways, and on one occasion a special machine was fully loaded. This is

a most significant fact, and shows the belief of the insurance brokers in air transport.

Another strange cargo has been poultry, arriving in large consignments for the Poultry Exhibition at the Crystal Palace. Flying is at any time a strange pastime for that least bird-like of birds, the hen, and we would like to know if their association with an Argosy has affected their laying qualities. We can only guess.

Talking of strange cargoes reminds me of the show which Imperial Airways have staged at Airways House. There can be seen a wonderful conglomeration of all those things which go to make up their freight list. It includes all kinds of weird goods, from dogs to wireless valves and printed fabrics to eggs.

An important visitor on Monday was the Chief of Bhor, who was shown over the aerodrome and taken up for a special flight in a Handley Page W. 10.

Last Tuesday, Sir Charles Hyde returned from Belgrade in the W 10, piloted by Capt. G. P. Olley. The machine had been converted into a faint imitation of the Balkan Express, and had both "bed and breakfast" installed. Sir Charles' journey, which had been undertaken to visit some archaeological excavations, had been interesting and fruitful.

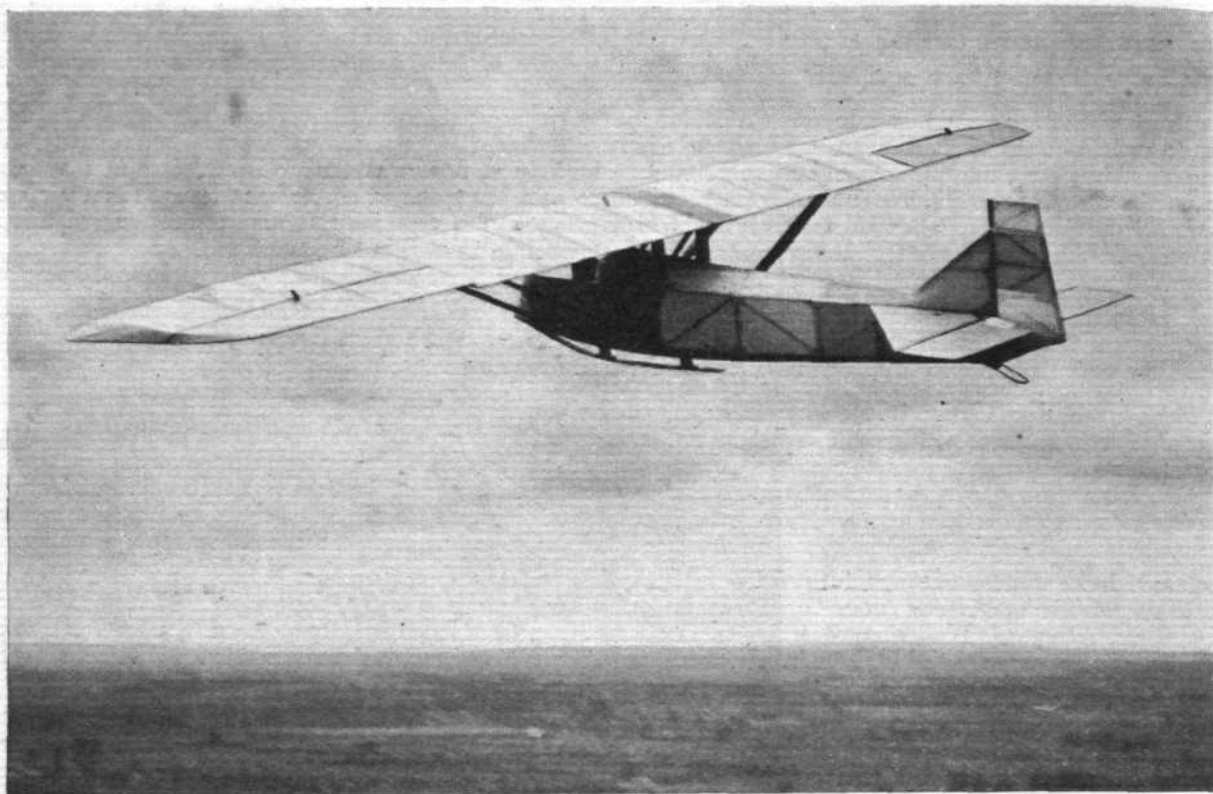
On Friday, Imperial Airways did another of their quick-changes which make such good newspaper "stories." It appears that a schoolboy at Lancing had to take an examination in the morning and catch a boat at Boulogne at 3 o'clock in the afternoon. During the short interval between the two events, Imperial Airways took charge of him. He caught his boat.

The Desoutter Works appear busier than ever, and have machines on the stocks for New Zealand, Hungary, and the Irish Free State.

It is fortunate for most of us on the aerodrome that next Monday is a holiday. Otherwise, apparently we could only get to our work by permission (on presentation of special invitation) of some great magnate who is staging a publicity stunt.

Incidentally, we hear that Amy Johnson is returning that day on the Indian Air Mail.

During the week there were 1,726 passengers and 76½ tons of freight handled at Croydon.



F./O. Buxton making the best glide of the match.

## INTER-CLUB GLIDING MATCH

Lancashire v. London

**A** GLIDING match between two clubs is a new event in Great Britain, and so deserves more than passing remark. It does not matter at this stage that the performers were all more or less beginners, so that a total of 12 min. 52 sec. compiled in six glides was sufficient to win the match. The times may seem trifling to foreign experts who are accustomed to sit on top of a rising gust until the cows come home: and they were trifling. But that did not matter. The point was that the first match between two clubs was held, and that it was carried out with such enthusiasm, that the public turned up to watch to the tune of some hundreds of motor cars, and that it all ended happily in humour without tears.

The Greeks and Trojans of the day, it almost goes without saying, were the gliding clubs of London and Lancashire. The topless towers of Ilium were found on the summit of Ivinghoe Beacon. The said towers were scaled by swarms of Britons, Picts, Scots, Angles, Saxons, Danes and other barbarous inhabitants of Britannia Magna. The meed of victory was not a laurel wreath, in fact I believe there was no prize but honour and glory. The roads as far as the eye could see were lined with motor cars.

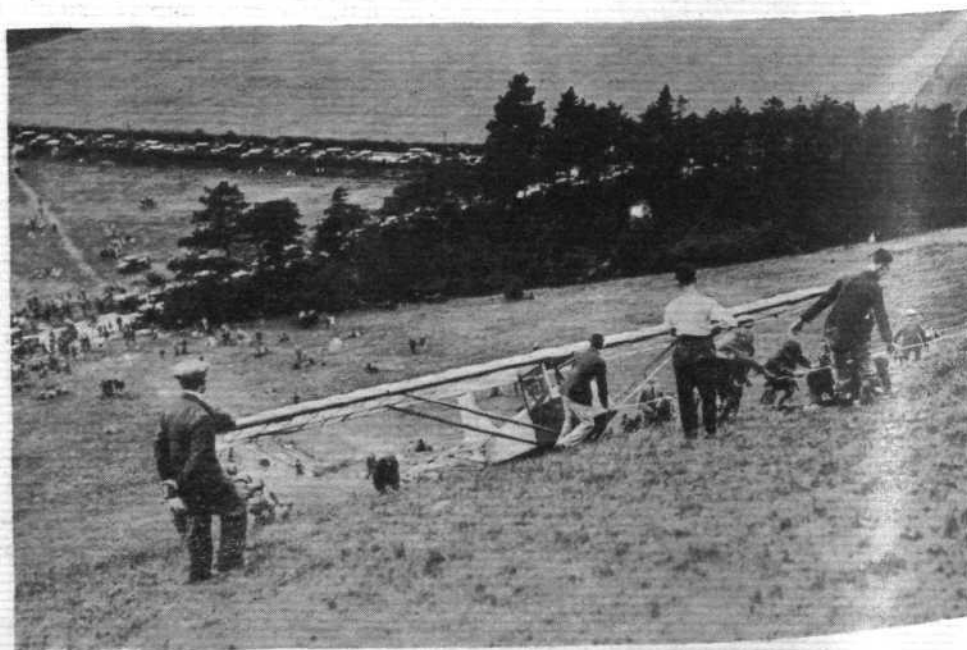
The event was advertised to begin after lunch, but at the last moment it was thought wise to make a start in the morning. There was no questioning the wisdom of the decision, as even with a fairly early start the last glider was not launched until 5.25 p.m., and though that glider went to roost all right, it did not come home to roost until about 7 p.m. But the press reporter must not be blamed if he did not witness events which took place before the advertised time of starting.

The teams were:—London: Capt. Latimer Needham, F./O. M. L. McCulloch, Flight Lieut. R. L. R. Atcherley, F./O. Buxton,

Mr. Marcus Manton, and Lt.-Col. the Master of Sempill, A.F.C.

Lancashire: Messrs. Alan Goodfellow, P. Michelson, F. B. Tomkins, B. A. G. Meads, and J. C. Weale. As only five Lancastrians were present, P. Michelson was allowed to make two glides.

In the morning five glides took place. It was not really a very good day for gliding, though possibly Herr Kronfeld might have enjoyed it. The sky was grey, with occasional rainstorms blowing up from the west. The wind might have been much stronger with advantage. It was variable both in strength and direction. The rising current of air, where the wind hit the rise of the Beacon hill was not very wide from end to end, or very deep. The lie of the ground is as follows. The mass of the Chiltern Hills runs roughly



Hauling a "Prüfling" up Ivinghoe Beacon. Behind are the trees in which Michelson "landed."





Ivinghoe Beacon, with Capt. Needham gliding in a "Professor."

from north-east to south-west, and on the Buckingham side is fairly sheer, though far less so than is the rise of the South Downs at Firle Beacon. Below, on the north-west stretches the plain of Buckingham and Bedfordshire. But the plain does not come straight up to the foot of the Beacon. Below, there is a plateau stretching for a mile or so out from the foot of the hill, which breaks the force of the wind.

The pilots who were first launched off the top of the Beacon had to find out conditions for themselves. Those who came later could profit by the experiences of the forerunners, though they always had to cope with the frequent changes in strength of the wind and consequently in the total area of the rising current. As the match was for the greatest total time in the air, it became very important to scrape together as many seconds as possible on each glide. The gliders were two "Prüflings" belonging to the London Club. The earliest attempts achieved the following results:—

London.		Lancashire.	
	Min. sec.		Min. sec.
Needham .. ..	2 7 $\frac{4}{5}$	Michelson ..	12 $\frac{1}{5}$
McCulloch .. ..	1 45 $\frac{1}{5}$	Goodfellow ..	1 31 $\frac{1}{5}$
Atcherley .. ..	1 59 $\frac{4}{5}$		

Tomkins was the next to be catapulted off the summit. He promptly turned to the left and flew along the crest as

far as the limit of the rising current. He nicely judged the spot to turn, and got round without losing the gust. But he could not get all the way back, so turned out over the plain and glided down, deftly catching some minor currents near the base of the hill which gave him a little more life. His time was 1 min. 57 sec. Buxton went next and gave the best exhibition of the day. He judged the area of the rising current with an accuracy which no other pilot was able to manage, and made about four courses along the crest of the Beacon. Finally he lost his gust when turning on the northern end of the beat, and had to glide down to earth. In addition to his nice judgment, Buxton made very tight turns, which enabled him to keep within the necessary limits. His glide of 3 min. 17 $\frac{2}{5}$  sec. was the best in the match.

Meads of Manchester went next. In his case, the team on the elastic rope were a trifle over-vigorous and the Prüfling was shot into the air with unnecessary velocity. Before the pilot had time to gain control and make a turn, his glider had been carried right through the current into the comparatively still air beyond where soaring was an impossibility. As Meads commenced to turn, he began to lose height rapidly and had to put his nose down sharply. He landed almost at once after only 55 seconds.

Two London representatives went next in succession. The first was the veteran pre-war pilot, Mr. Marcus Manton. He went away to the south on a left-handed turn and stayed in the air for 2 min. 11 $\frac{3}{5}$  sec. He was followed by the Master of Sempill, who was content to forge straight ahead. Possibly he hoped to reach the end of the lower plateau and there find another rising current to help him on. Had he succeeded, he would probably have been far from popular with the stalwarts who had to bring the gliders back. But if that was the intention, it did not succeed. The height of the Beacon and the gliding angle of the Prüfling did not suffice to carry the machine to the edge of the next slope, and Sempill landed after 1 min. 30 $\frac{1}{5}$  sec.

Two Lancashire glides ended the competition. Weale had evidently studied the ground and the performances of those who had gone before to good effect. Keeping well within the rising gust, he turned



The Master of Sempill in a "Prüfling."



Capt. Needham and Mr. Hembrow in the "Poppenhausen."



**THE LANCASHIRE TEAM :** From left to right :—A. Goodfellow, P. Michel-son, F. B. Tomkins, B. A. G. Meads, J. C. Weale.



**A GLIDING GROUP :** From left to right :—Mr. W. O. Manning, Maj. H. A. Petre, D.S.O., M.C., Mr. Gordon England, Capt. Latimer Needham, Capt. A. G. Lamplugh, Mr. Ashwell Cooke, Mr. A. Goodfellow, F./O. M. L. McCulloch, Mr. F. B. Tomkins, Mr. G. Hembrow, Mr. J. C. Weale.

left-handed to the south, and followed the crest of the Beacon to the gap. There he made a right-handed turn of about 90 deg. and headed out across the lower plateau for a knoll, which throws up a surprisingly active gust. He duly found this rising current, and so maintained his height for some time. Of course, he could not get back, but he manœuvred well when near the ground and postponed his landing as long as possible. His time was 2 min.  $2\frac{2}{3}$  sec., which was the best achieved by any of the visitors.

Michelson's second attempt was the last of the match, and it provided the touch of comic relief which always helps out any performance. The start was not too good, for the rope did not fall off the hook as quickly as it should have done, and caused the glider to pitch. The pilot calmly and promptly righted it before he had shot through the gust, and made the usual left-hand turn. On reaching the gap at the end of the limits of the Beacon, he tried to turn back, but his turn was too wide and he lost his current. Thereafter his manœuvres were—well, interesting. He turned towards the cross roads at the bottom of the hill, a spot where the cars most did congregate, flanked by a most picturesque grove of fir trees. Michelson glided across the trees losing height fast, and then seemed to have a good look at the road, the cars, and the field of corn beyond. He did not seem to like the look of any of them, so made a final turn back on his tracks. He found himself faced by the firs, and was now lower than the tops of the trees. Gallantly he charged at them gathered a little speed by a bit of a dive, yanked his stick back, pulled his nose up, and stalled his glider on the lateral branches of two firs. There it stuck, the wings resting on masses of twigs. An energetic man climbed a neighbouring tree with a rope and threw it to the

pilot. With a loop round his waist, and with the help of the man in the tree, Michelson was dragged out of his cockpit and scrambled to the ground. The Pruffling was only slightly damaged, mainly through tears in the fabric, and was also extricated.

The question then arose, should a glide which ended in an unorthodox landing, not on the ground, count in the competition. No rule to the contrary has been framed by the B.G.A., and no one knew what the Germans do in such circumstances. Mr. Gordon England, chairman of the B.G.A., said that he would want notice of the question. Finally, Michelson's time up to his contact with the trees was allowed, namely, 1 min.  $27\frac{2}{3}$  sec., but whether that is to count as a precedent I cannot say.

The total times added up as follows :—

London, 12 min. 52 sec.  
Lancashire 8 min.  $5\frac{1}{2}$  sec.

Considering that some of the Lancashire members had never before been shot off the top of a hill until they came to Ivinghoe their performance is considered very creditable. A return match has been arranged to take place in Lancashire.

During the afternoon a couple of demonstration flights were made. Needham took Mr. J. Hembrow of Lancashire up for a flight in the Poppenhausen two-seater. A flight was also made in a Professor. Last of all the Master of Sempill made a trial flight in a Pruffling. He turned south this time and carried on past the gap without losing much height. He glided on quite a long way. Then he turned and came back at a lower altitude finding lift from currents near the foot of the hill. He reached a point opposite the starting point before he landed down below.

**THE ISLE OF WIGHT GLIDING CLUB.**—The I.W. Gliding Club was officially formed on July 3 at a meeting held at Capt. F. W. Merriam's old gliding school at Whiteley Bank. Several members were enrolled, and a provisional committee elected to attend to the necessary details of organisation. Capt. Merriam sportingly placed his gliding site, hangar, and glider for preliminary ground instruction at the use of the club, and offered his services as instructor.

Work in the field since the club's formation has been rather limited, owing to the lack of proper equipment. The provisional committee have, however, been working very hard, with the result that the first general meeting, to complete the inauguration of the club, was held at the Guildhall, Newport, on July 28. The Mayor of Newport (Councillor H. W. Horan, J.P.) presided, and the meeting was well attended. Sir A. V. Roe, who was represented by Mr. Richards (of the D.O. Staff, Messrs. Saunders-Roe, Ltd.), was unanimously elected President of the club, and in accepting the office sportingly presented the club with all the necessary materials for the construction of a club glider. The club is fortunate in having among its members a large number of gentlemen actively connected with the aircraft industry. These have expressed their willingness to serve on the Technical Committee, and to supervise the work of constructing the first glider, which is being commenced immediately.

The club has 35 founder members, and other members are being steadily enrolled.

**SOUTH ESSEX AERO CLUB.** This club has formed a Gliding section and are shortly obtaining a glider with which to start operations. They have the use of suitable ground at Havering, and those who are interested should apply to the Secretary, Mr. Morton-Hicks, at 19, The Pavement, Chadwell Heath. Telephone, Seven Kings 1032. Sir George Hamilton is the President and Mr. F. G. Smith the Chairman. The entrance fee has been fixed at 10s. 6d., and the yearly subscription £2 2s. for the start, but this may be raised for those joining later on. During the winter months it is proposed to build a glider of their own.

**HERTS AND ESSEX GLIDING CLUB.**—This club held its third flying meeting at Birchanger, near Bishop's Stortford, on Sunday, July 27, when five members took off successfully from a nearly flat field, making 26 flights during the afternoon, the youngest member being the star performer.

With such encouraging progress to report it is felt that with a more suitable field the club should soon have quite a number ready to take their test for the "A" ticket.

By some mischance all the best hills in the district have trees or crops on them, but a search for an ideal site is proceeding with great energy.

**THE KILMARNOCK GLIDING CLUB** is going ahead well and the membership has increased to 25. This club is one of the pioneers of gliding in Scotland and as such deserves all the support it can get.





# AIR TRANSPORT

## IRELAND AND AIR TRANSPORT

**C**OLONEL CHARLES RUSSELL, the ex-Commander-in-Chief of the Irish Free State Army Air Corps, in a special interview to *FLIGHT* has given us his opinion of the delay in starting an Anglo-Irish air service and the lack of civil aviation generally in Ireland. The present position of flying in the Free State and Northern Ireland is exceedingly poor; civil aviation being represented only by the Irish Aero Club, which has its headquarters at Baldonnel aerodrome, a considerable distance out of Dublin, the membership is approximately 200, of which slightly less than half are pilot-members. Colonel Russell is the honorary instructor, and is assisted by his younger brother, Lieut. Russell. The machine owned by the club is a dual-controlled Avro, fitted with an Armstrong Siddeley Genet engine; they are fortunate, however, in having the use of two members' machines—another Avro and a D.H. Moth. No flying licences are granted at present in the Free State, as the Minister for Industry and Commerce, within whose province flying comes, has not yet applied to the Dail (Parliament) for the money necessary to establish the machinery required for their issue. Flyers who are trained by the I.A.C. have therefore to obtain their licences in England from the British Air Ministry. A flying club for Northern Ireland has been established at Belfast, but as yet it is purely "on paper," as it possesses neither machine nor aerodrome.

It was pointed out by Colonel Russell that at the present time only one-sixteenth of the Irish National Army vote is being devoted to military aviation, whereas in other countries the appropriation is about one-fifth. If an adequate allowance were made from this vote, civil aviation would benefit considerably by the forming of an Air Force Reserve such as exists in England to-day. It will be remembered that Sir Sefton Brancker had a similar experience in the early days of the R.A.F.

An air line between Dublin and London has been advocated for a long time, but up to now no definite action has been taken. Irish Airways, Ltd. are, however, trying to secure a subsidy from the Free State Government to get this service running; once started, it should not require a subsidy of more than £5,000 per annum, with gradual yearly decreases, providing that full pay-loads at £3 per passenger were obtained. This service could, said Colonel Russell, be run

with four machines, and be so arranged to link up with the Continental services at Croydon.

Dealing with the economics of the question, he was of the opinion that the line would be an even better paying proposition if the machines were started from Queenstown, which is an Atlantic liners' port of call, and flew to Dublin, then on to London, as this would enable a reasonable number of flying hours per trip to be obtained from both pilot and plane. Another route would be from Galway, also an Atlantic shipping port, to London via Dublin. At a later date, a flying-boat service from Queenstown to Cherbourg might be instituted. Dublin is in a remarkably good position to have a good airport, Phoenix Park, which is one of the largest parks in Europe, is within five minutes' journey from the business centre of the city and an excellent landing ground and airport could be made if Customs facilities were provided. The machines, however, would probably have to be housed elsewhere, as the ground is the property of the inhabitants of the City of Dublin.

Questioned on the practicability of the use of flying-boats from Dublin to Liverpool, Colonel Russell said that the distance was decidedly uneconomical for that type of machine, and the route was not a good one in any case; an experimental service between Belfast and Liverpool was tried some time ago, but the delays caused through fogs in the Mersey resulted in its being abandoned. Planes flying from Dublin to London could call at Chester to set down passengers for the north if required, but could not pick up others unless a special arrangement was made with Imperial Airways.

In twenty years, perhaps, trans-Atlantic services would be established, and Ireland, as the farthest point west on this side of the Atlantic, would no doubt be selected as a base, but if the Government of Ireland think that they can "sit on the fence" until these services become an accomplished fact, they will be making a very grave mistake, for others, more enterprising, will step in and seize on the opportunities offered. "The whole difficulty is that the Government does not realize that flying has grown out of the experimental stage and established itself as a rapid and efficient means of communication which is essential to the civilised world," was the summing up of the situation given by Colonel Russell.

### Air Mail Propaganda

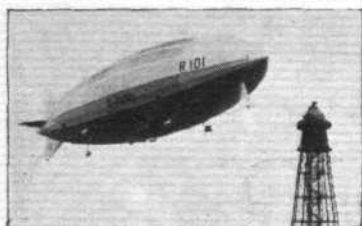
ALL who appreciate the importance of developing civil aviation in this country, and the Empire will have welcomed the Postmaster-General's Report showing the growth of air mail traffic in the quarter ended June, 1930, as compared with the corresponding period of 1929. The distribution of leaflets, giving particulars of the various air mail services in the post offices in London and the provinces, the recent inclusion of a panel of air mail labels in the 3s. books of postage stamps, and the installation of a number of the new blue air mail posting boxes are all excellent methods of advertising the air mail. But there is still room for considerable improvement in the education of the general public in the advantages of sending letters by air. The Civil Aviation Section of the London Chamber of Commerce has for the past year been constantly pressing for increased propaganda for the encouragement of a more general use of the air mail. Whilst effect has now been given to some of its proposals, it has at present been unable to persuade the Postmaster-General to utilise the stamp-cancellation dies for the purpose of advertising the air mail. This has proved a most effective method in Australia, France, Germany, and U.S.A., where slogans such as "Air Mail Saves Time" are employed. One is at a loss to understand why H.M. Post Office should find itself unable to utilise the postmark, which costs nothing, whilst spending money on advertising the service in other and possibly less effective ways. And, why not air mail stamps?

### Night Air Mails to Berlin

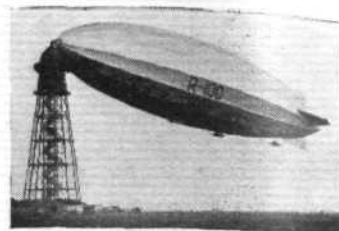
THE Postmaster General announces that, as from July 28, the latest time of posting for the Night Air Mail Service from London to Cologne, Hanover and Berlin, will be 8 p.m. at the special Air Mail posting box at the General Post Office, and 6.45 p.m. to 7.15 p.m., according to the locality, at the other special Air Mail boxes in London. The latest time of posting elsewhere can be ascertained locally. The mails should reach Cologne and Hanover in time for the first delivery next morning, and Berlin in time for the second delivery. The charge will be 4d. for the first ounce and 3d. for each subsequent ounce, including postage and air fee.

### Growing Air Traffic in America

THAT more and more people are using air transportation is indicated by the continually mounting figures of the traffic reports of American Airways, Inc., transport subsidiary of the Aviation Corporation. The latest report shows that 7,708 passengers used the air lines during the month of June, an increase of 11 per cent. over the previous month. This is the largest number reported by any of the operators. Revenue increased 12 per cent. during the same period. During the first six months of 1930, 34,959 passengers flew over the various lines of American Airways; almost a 70 per cent. increase over 20,659 passengers carried the entire year of 1929.



# AIRSHIPS



## R 100 STARTS FOR MONTREAL

**A**FTER having made a long trial flight over Great Britain during Friday night and Saturday, and having been passed fit for the Atlantic crossing, R 100 left the mooring tower at Cardington at 3.45 a.m. on Tuesday, July 29, bound for Montreal.

Squadron-Leader R. S. Booth, A.F.C., commands R 100 on this flight. The navigator is Squadron Leader E. L. Johnson, O.B.E., A.F.C., the first officer is Capt. G. F. Meager, A.F.C., the 2nd officer is Flying Officer M. H. Steff, while Squadron-Leader A. H. Wann is supernumerary. Mr. M. A. Giblett acts as meteorological officer. In addition the following officials of the Royal Airship Works are on board: Wing-Commander R. B. E. Colmore, O.B.E., Director of Airship Development, Major G. H. Scott, C.B.E., A.F.C., Assistant Director (Flying), and Mr. F. M. McWade, A.I.D. Inspector.

The members of the crew are: Chief Coxswain, Flight Sergeant T. Greenstreet; Asst. Coxswains, L. A. Moncrieff, G. E. Long, T. Hobbs. Riggers, C. Broughton, G. G. Cutts, R. L. Deverell, C. Flatters, C. H. Rumsby, G. R. Scott, F. Williams, A. Wiseman. Foreman Engineer, W. Angus; Chargehand engineers, N. Mann, A. F. Stupple, G. Watts; Engineers, R. Ball, H. W. Clark, H. Cumley, F. Gaye, L. A. Hunt, J. Jowitt, D. Lelliott, H. Millward, J. M. Sturgeon. W/T. Chargehand, S. Keeley; W/T Operators, G. H. Atkins, A. Disley. Stewards, A. H. Savidge, F. Hodnett, J. F. Meegan. Captain's clerk, A. Eldridge.

The following passengers are on board: Sir Dennistoun Burney, Mr. N. S. Norway (of the Airship Guarantee Co., Ltd.), Lt.-Commr. R. St. J. Prentice, R.N., representing the Admiralty. The total number on board is 44.

The great circle route from Cardington to St. Hubert, Montreal, is 3,242 statute miles (2,800 nautical miles) and lies near Birmingham, Dublin, and Roscommon to the north of Newfoundland, over Anticosti and down the St. Lawrence past Quebec. The actual route flown is being dictated by the meteorological conditions, and will certainly be longer than the great circle course. Six typical routes had been worked out, three northerly and three southerly. At this time of year one of the northerly routes would usually offer the quickest and most favourable passage. The most northerly of the routes lies over the north of Ireland to a point south of Cape Farewell, Greenland, a Mercator course to Belle Isle, across Labrador, and along the St. Lawrence. The length of this route is about 3,385 statute miles.

When R 100 had slipped from the tower at Cardington she headed past Rugby and Chester, and passed over the Mull of Galloway, and the Maidens. By noon (all these times are Greenwich mean times) she reported her position at 55° 24' N, 07° 50' W. The captain had hoped to find an east wind to the north of Ireland, but owing to the movement of a depression he found a northerly wind and altered course to the south. At 18 hours the ship was at 54° N 15° 20' W flying at 2,100 ft., with a wind just west of north at 29 m.p.h. By midnight on the 29th the ship had got out of the influence of the depression and was meeting lighter northerly winds on the northern edge of an anticyclone centred on the Azores. The ground speed increased from 50 to 60 m.p.h. On Wednesday, July 30, at 6 a.m. the airship was at lat. 54°, long. 26° 30' W. A wind of 10 m.p.h. was blowing from the south east, and the airship was flying at 1,300 ft. The temperature was 47°. R 100 there sighted the first steamer since leaving Ireland, and was near the "Ansonia," though she had not then sighted her. At 7.15 a.m. R 100 was in company with the "Tuscania." She was then at 53.48 N, 30.31 W. The wind was still just east of south, blowing 20 knots and freshening. The airship's ground speed was 55 knots. She reported that she expected to sight land at 8 a.m. next day (Thursday). By noon she had passed long. 35, which roughly marked the half of the Atlantic crossing, being at lat. 54° 40' N, long. 39° 20' W. She was flying through cloud at a height of 1,200 ft. The temperature was 50°. She reported her speed at 70 knots with a wind

of 30 m.p.h. rather more easterly than before. By that time she had made good 1,868 miles of the great circle course, though she had actually flown a good deal more. R 100 was consistently reported as behaving splendidly and everything on board as "O.K."

The airship carries 1,918 lb. of foodstuff on board, which is sufficient for three days' ordinary rations for 48 persons, with one day's extra rations and one day's emergency rations. She also carries 500 galls. of water for drinking and washing.

R 100 is equipped for long wave transmission and long and short wave reception. The wave-lengths are not being divulged, as there is always a risk that mischievous or thoughtless persons will endeavour to tune in and perhaps endanger the ship by interfering with important weather forecasts, or essential messages from the airship. For the first 1,000 miles communication was direct with the wireless station at Cardington; after that via the Rugby W/T station until the airship reached longitude 35 deg. W. Thence it was through Louisburg W/T station until R 100 gets into direct communication with St. Hubert. When about 100 miles off her destination, the ship may change over to R/T, and a short wireless talk will be broadcast by Wing Commander Colmore.

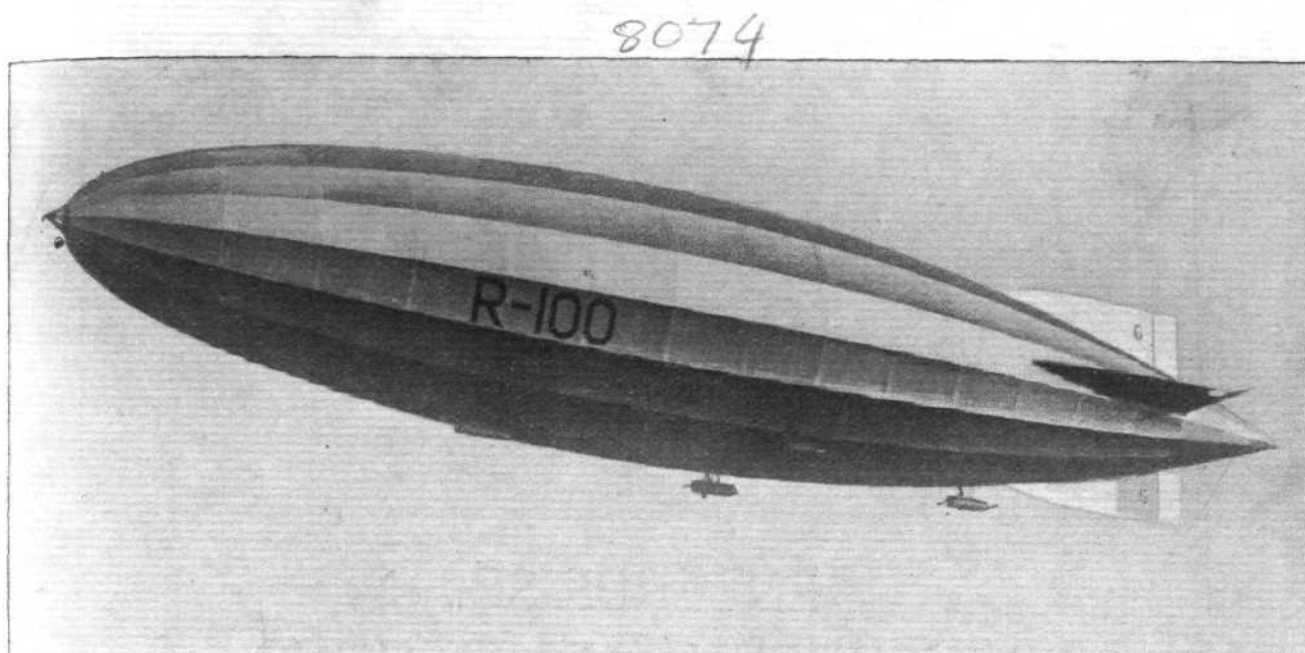
During her flight R 100 received a selection of the regular synoptic weather reports from the Air Ministry, special reports from Cardington, weather messages from ships at sea, regular synoptic reports from Greenland, regular weather reports from the U.S. Weather Bureau, and special reports from the Canadian Meteorological Office, which has established a centre at St. Hubert. Transmission of weather maps may be carried out from Cardington, but these are regarded as experimental.

An interesting side line of the flight will be experiments carried out at the request of the Cambridge School of Agriculture in order to ascertain whether the upper air over the Atlantic contains traces of vegetable organisms. R 100 is carrying a number of "Petri" dishes which will be exposed outside the control car at regular intervals of three hours. A "petri" dish is a small flat glass disc with a glass cover



Sir Dennistoun Burney, C.M.G., Managing Director of the Airship Guarantee Co., Ltd., and Major G. H. Scott, O.B.E., A.F.C., Deputy Director (Flying) of Airship Development.

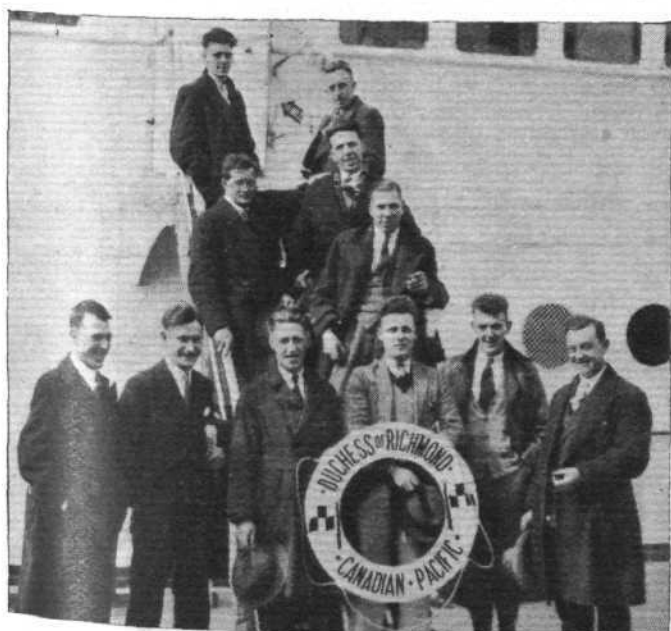




containing a preparation of gum agar-agar, the whole being sterilised before use. When the dish is exposed, the living organisms fall on the preparation and can live and breed on it. On the arrival of the airship in Canada, the dishes will be sent back to Cambridge.

#### Careers of the Officers

Wing-Commander R. B. B. Colmore, O.B.E., was born at Portsmouth in 1887, and after passing through H.M.S. *Britannia* entered the Royal Navy. He retired in 1911, but was mobilised on the outbreak of war with the rank of Lieut. Commander. He served with the armoured cars in Flanders and Gallipoli, and in 1915 commanded the first expedition against the Senussi. Next year he transferred to the airship section of the R.N.A.S., and while commanding at Mullion he evolved a system of dealing with submarines by combined patrols of airships, aeroplanes, and surface craft. He was now Lieut.-Colonel in the R.A.F. His system was adopted for the whole coast of Britain, but was not put in force universally before the war came to an end. At the time of the Armistice Lieut.-Col. Colmore was posted to the staff of the Commander-in-Chief of the Grand Fleet for aircraft operations. After the war he was granted a permanent commission in the R.A.F. with the rank of squadron leader.



The Relief Watch of R 100, which went to Canada some time ago. The names are: H. Addinell, S. C. Armstrong, R. J. Burgess, A. F. Burke, L. Hall, D. Kershaw, E. R. Patterson, D. Simmonds, C. Watson, H. Wilson, and C. W. Larkins.

He has been seconded for service with airships, and became Director of Airship Development with the rank of Wing Commander at the beginning of the present year.

Major G. H. Scott, C.B.E., A.F.C., was born at Catford, Kent, in 1888, and was educated at Richmond School, York, and the R.N. Engineering College, Keyham. He followed the profession of an engineer until the outbreak of war, when he joined the R.N.A.S. He served in various airships and on the formation of the R.A.F. he became Major. In 1918 he was given command of R 34, and next year he took this ship on the first airship crossing of the Atlantic, from East Fortune to New York and back to Pulham. He was demobilised in 1919, but next year was appointed (in a civilian capacity) to the Royal Airship Works. He is the inventor of the Air Ministry system of mooring airships to a tower.

Squadron-Leader R. S. Booth, A.F.C., was born in 1895 at Hughenden, Bucks, and was educated at Osborne and Dartmouth. He transferred to the R.N.A.S. in 1915 and commanded non-rigids until 1918, when he was given command of R 24. After the Armistice he served for four years on the Inter-Allied Aeronautical Commission of Control. In 1919 he was given a permanent commission in the R.A.F. as flight lieutenant. He won fame and a bar to his A.F.C. when R 33 broke away from the mast at Pulham. He was officer of the watch at the time, and he successfully navigated the airship back to Pulham under her own power—one of the finest feats of airmanship ever accomplished. For this he was promoted to squadron-leader. He is also an aeroplane pilot, and is seconded from the R.A.F.

Squadron-Leader Johnston, O.B.E., A.F.C., was born in Sunderland in 1891, and educated at the Marine School, South Shields. He is a qualified master mariner, and was in the R.N.R. In 1916 he transferred to the R.N.A.S. and served with airships. He has retired from the R.A.F., but belongs to the R.A.F.O.

Capt. G. F. Meager, A.F.C., was born in 1893 at Newport, I.W. He joined the R.N.A.S. in 1915, and went to the Adriatic with a flight of airships and was decorated by the King of Italy. He was demobilised in 1919, but afterwards served in R 33 on her experimental flights.

Flying Officer M. H. Steff was born in 1896 at Luton. He joined the Navy in 1914, and was present at the battle of Jutland. Then he joined the kite balloon section of the R.N.A.S. He is seconded from the R.A.F. for airship duty.

Mr. M. A. Giblett was born in 1894 at Englefield Green, Surrey, and was educated at the Universities of Reading and London. During the war he was meteorological officer with the R.E., and later has been in charge of all airship meteorology.

Squadron-Leader A. H. Wann was born in 1895 at Norwood, and was educated at Osborne and Dartmouth. In 1915 he entered the airship section of the R.N.A.S. He was in command of R 38 when she broke up over the Humber, but survived. In 1924 he learnt to fly an aeroplane, and he has attended the Staff College at Andover.

Mr. F. M. McWade was born at Glasgow in 1872, and was once in the R.E. School of Ballooning. He helped in the building of the "Nulli Secundus," and of later British airships.



## ENTERPRISE IN MODERN ADVERTISING

**M**ANY readers of *FLIGHT* must have watched the non-rigid AD 1 airship as she manoeuvred over London on Friday, July 25. She came up from her temporary base at East Horsley, Surrey (where she has been moored in the lee of a high belt of trees ever since July 13), and returned there again after a cruise of some three hours. Cramlington is the real home of the AD 1, for that is where her shed is. This shed was built for "NS" airships in 1918, but was never used as an airship shed until the Airship Development Co., Ltd.—the builders of the AD 1—took it over last summer. This airship is employed as a medium for aerial advertising, large spaces being provided on each side of the envelope for the "bill-posting."

The AD 1—which was fully described in *FLIGHT* for November 8, 1929—made her first flight on September 13, 1929 (it was a Friday, too!), and made a number of ascents up to December last, when she was deflated. Some modifications were then carried out, including the fitting of hand starting, dual ignition, a third cockpit, and foot steering in place of a wheel. She was re-inflated last May, and carried out speed trials, attaining a speed of 52 m.p.h., and then made some advertising flights, with such success that the firm booked her again. On June 21 she started out on her flight to her southern base, near the old airship station at Capel, where a pit had been prepared to take her. As this was rather a long flight, it was decided to land at Grantham. She left Cramlington, with Capt. Ball as pilot and Flt.-Sgt. Long as coxswain, under perfect weather conditions, but by the time Lincoln was reached an increasing head-wind was encountered, and from there on to Grantham she had to fight every inch of her way, for the wind rose to a speed which was calculated to have been over 40 m.p.h.

The ship was pitched about somewhat but behaved splendidly, and it speaks well for the skill of her crew, who were naturally out of practice, that she reached base and landed in safety. She remained moored out in a natural shelter, weathering some very high winds with complete success, and left for Capel on Thursday, June 26, leaving Grantham at 8 a.m. and arriving soon after 1 p.m., when she made a splendid landing and was walked into the mooring pit by Capt. Knowles, who had a great deal of experience of mooring out during the latter part of the war.

This system of mooring is exactly the same as that developed by the old No. 1 Squadron R.F.C. (Airships and Kites), and has proved extremely successful. In the days of the army airships the various ships often used to make camps in private parks, and in the manoeuvres of 1913, *Delta* and *Eta* rode out extremely high winds in this manner with great success.

Although the ship was well protected, it was a very difficult place to get her in and out of, but it served its purpose well, and it was while moored out there that the advertising banners were laced to the sides of the envelope.

This job having been done, and the engine having been overhauled, she started out for East Horsley, whence it had been decided she should fly over London and pay the traditional visit to St. Paul's, which all British airships do. She left Capel at 12.30 p.m., in a nasty wind, and landed some two hours later, and was safely moored.

On the night of the 14th the wind threatened to blow from a point more to the north, and the rain came down in torrents, so the ship had to be moved to a more sheltered position. A volunteer handling party was collected, and these, together with the ship's proper crew (which consists of a coxswain



**NATURAL AIRSHIP HARBOURS:** The "AD 1" at two of her open-air mooring bases. On the left the pit at Capel, and on the right, a natural tree-shelter.





The "AD1" in flight over "Flight." This view, and the "worm's-eye" view on the previous page, of the "AD" airship were taken from the roof of "Flight" offices during the ship's visit to London on July 25. (FLIGHT Photos.)

an engineer, two riggers, and the two pilots), successfully carried out this difficult operation under the most trying conditions. Here she remained, riding out a gale on one occasion and many severe rain-storms, with complete success until the high winds at length ceased to blow, and she was again able to take the air.

On her flight over London she carried her normal crew and Sgt. Sanson, her engineer (who was once one of the crew of R.33), and in spite of the length of time she has been out in the open, she had enough lift to have carried another person, for the envelope has stood the mooring-out excel-

lently, although much hot sun has played on it, and its gas-holding properties are still good.

At the moment of writing, a Rolls-Royce "Hawk" of 75 h.p. is to be substituted for the present "Hornet," and for this purpose the car is to be taken off the ship and the envelope bagged down.

After certain further flights, she is then off to Belgium to do some advertising work, thus following in the footsteps of the British airships, Naval Airship No. 3, *Beta*, and "SSZI," which visited that country on rather different missions and under unpleasant conditions between 1914 and 1918.



### Flying Boats' Summer Cruise

THE Summer Cruise of No. 204 (Flying Boat) Squadron of the R.A.F. this year was along part of the east and south coasts of Ireland. On July 25, three Supermarine "Southamptons," under the command of Sqdn.-Ldr. F. H. Lawrence, left Mountbatten, Plymouth, for Dun Laoghaire, Co. Dublin. The English coastline was followed as far as Pembroke, where they crossed the Irish Sea and continued northwards. At Wicklow, a landing had to be made, owing to a slight defect in the oiling system of one of the Napier "Lions," there was a few minutes' delay before they left again for Dublin, where they arrived shortly afterwards. The planes circled the city and attracted considerable attention before landing in the Bay and "taxying" to their moorings in Dun Laoghaire Harbour, the journey having taken approximately 3½ hrs. with a following wind. During the afternoon, a Vickers "Vespa" of the Free State Air Service flew from Baldonnell aerodrome and circled over the harbour in salute to the visitors. On Saturday, the 26th, one machine flew to Invergordon, Cromarty Firth, and was to return the same day, but weather conditions delayed it until Monday. The other machines engaged in short local flights over the neighbourhood on both Saturday and Sunday. A courtesy visit was paid to the officers of the Squadron by Commandant G. J. Carroll, O.C. Army Air Corps, who invited them to visit his headquarters at Baldonnell, Co. Dublin. The flying-boats left Dun Laoghaire for Queenstown, Co. Cork, on the 28th, and completed the journey southward in about 2½ hrs., they were escorted for a short distance by an Army plane. Local flights were made around Queenstown on the 29th and 30th, and the squadron returned to its base at Plymouth on Thursday, the 31st. This is the first time that any R.A.F. machines have visited the Irish Free State since the signing of the Anglo-Irish Treaty in 1921, and therefore aroused a good deal of interest among the inhabitants of the towns visited.

### Air Ministry Test of Russell Parachute

WE publish below the Air Ministry test report on the Russell Lobe parachute, 1929 type, manufactured by the British Russell Parachute Co., Ltd., of Stoke Newington. The report reads as follows:—

1. The parachute body in all drops behaved in a satisfactory manner and the descents in varying weather conditions were very steady.

2. A test was carried out with twists in the rigging lines. A 200-lb. dummy was dropped at 1,000 ft. from an aeroplane with an air speed of 100 m.p.h. The parachute fully developed after falling approximately 500 ft. The rate of descent after development was normal to type.

3. *Rate of Fall.*—200-lb. dummy at 1,000 ft. at 80 m.p.h.: Average of 5 drops, 23.267 ft. per sec.; average time to open, 2 sec. The rate of fall of this parachute is satisfactory. There is reason to suppose that if a larger number of descents had been timed, the average rate of fall would not have exceeded 21 ft. per second.

4. *Shock of Opening.*—One drop from Westland "Witch." 200-lb. dummy at 1,000 ft. at 100 m.p.h.: shock of opening, 1,410 lb. One drop from Westland "Witch." 400 lb. dummy at 1,000 ft. at 100 m.p.h.: shock of opening, 1,750 lb. Three rigging lines pulled away from the periphery during this test.

5. *Development Tests.*—Two drops from Vickers "Vimy." 200-lb. dummy at 1,000 ft. at 80 m.p.h.: satisfactory. One drop from Vickers "Vimy." 200-lb. dummy at 1,200 ft. at 80 m.p.h.: satisfactory. Two drops from Westland "Witch." 300-lb. dummy at 1,000 ft. at 100 m.p.h.: satisfactory. Five drops from Vickers "Vimy." 200-lb. dummy at 3,000 ft. at 75 m.p.h.: satisfactory. (Pack damaged and small hole in silk body during one drop.) Three drops from Westland "Witch." 200-lb. dummy at 3,000 ft. at 100 m.p.h.: satisfactory. (Belt stitching completely broken during one of these drops.) One drop from Westland "Witch." 300-lb. dummy at 1,000 ft. at 160 m.p.h.: satisfactory. Time to open, 2.5 sec. (Harness stitching broken.) One drop from Westland "Witch." 400-lb. dummy at 1,000 ft. at 100 m.p.h.: satisfactory. (Belt stitching broken.) One drop from Westland "Witch." 400-lb. dummy at 1,000 ft. at 160 m.p.h.: satisfactory. (Belt stitching broken.)

6. *Pack.*—It is considered that the method of fitting the rip cord could be improved. The position of the cones is such that they are not easily accessible for examination.

## MISS AMY JOHNSON'S HOMECOMING

**A**S announced in last week's issue, Miss Amy Johnson is due back in England on August 4, when she is expected to arrive at Croydon Aerodrome—where she will be accorded an official welcome—in the Imperial Airways air liner from Salonica, at about 6 p.m. Arrangements have been made for a large escort of aeroplanes to meet her at Lympne, and accompany her to Croydon. The Air Ministry has issued special instructions to pilots of aircraft forming this escort—who, after notifying the Air Ministry of their intention of taking part, will have to assemble at Lympne where each machine will be allotted a position.

On arriving at Croydon the escorting machines will circle overhead until the Imperial Airways air liner, with Miss Johnson on board, has landed, and then land in rotation (according to the position allotted at Lympne), and taxi to the north-east corner of the aerodrome. All other civil aircraft arriving at Croydon during the ceremony will taxi to a position immediately south of the normal arrival and departure area.

Miss Johnson will be received at Croydon by Lord Thomson, who will convey to her the congratulations of the Air Ministry. It is anticipated that enthusiastic scenes will be witnessed on this occasion—probably greater even than when Lindbergh arrived at Croydon after his Atlantic flight.

Two days after her arrival at Croydon, on August 6, Miss Johnson will attend a luncheon at the Savoy, given in her honour by the *Daily Mail*, and presided over by Mr. Esmond Harmsworth, when she will be presented with the *Daily Mail* cheque for £10,000. At this luncheon will be present many of the foremost representatives of British youth, leaders in sport, industry, art, literature, politics, and other walks of life—including, on the aviation side, Sqdn.-Ldr. Orlebar and F/O. D. Atcherley.

At the same time she will receive a gold bowl inscribed: "To Miss Amy Johnson, C.B.E. A Tribute from the Youth of Great Britain to her British Courage and Endurance during her historic flight in JASON from England to Australia. May 5-24, 1930."

The London Aeroplane Club will entertain Miss Amy Johnson at a dinner-dance at the Park Lane Hotel, Piccadilly, on August 7, at 8.30 p.m. (Tickets £1 1s. each.) The number is limited to 200 and applications will be dealt with in order of receipt. Members are requested to apply to the Secretary at 3, Clifford Street, London, W.1.

A few days later Miss Johnson will start on her provincial tour, with her D.H. "Moth" *Jason*, opening with a three days' visit to Hull, her native town, where she will be given a civic reception and banquet.

On July 27 Miss Johnson arrived at Suez, on the *Naldera*, which subsequently moored alongside H.M.S. *Ramillies* at Port Said. Here, after warm greetings from the Governor

and officers and men of the *Ramillies*, she landed and proceeded to Cairo, where she arrived on July 29, and was received by the British Consul-General. To-morrow, Saturday, Miss Johnson will fly across the Mediterranean in an Imperial Airways "Calcutta" flying boat to Salonica, whence she will proceed on Monday to Croydon in the "Argosy" air liner.



MISS JOHNSON AT SYDNEY: An "impression" of Miss Amy Johnson flying over the Sydney Harbour Bridge (under construction) in the National Airways Avro 10, on June 4



### Mr. E. L. Hook's Body Found

AFTER over two weeks' search by several parties, an expedition organised by the *Daily Mail* has found the body of Mr. E. L. Hook, who with Mr. J. Matthews crashed between Akyab and Rangoon on July 3 during a flight from England to Australia. The airmen, it will be remembered, journeyed on foot through the jungle until Mr. Hook collapsed, and Mr. Matthews proceeded alone and eventually reached Prome. The *Daily Mail* search party, of 12 picked Britons exceptionally well equipped, left Rangoon on July 22, and the report of their finding the body came through from Rangoon early last Wednesday morning.

### Japanese Flight to Tokio

MR. ZENSAKU AZUMA, a Japanese pilot, who has been flying since 1922, came to England from Pasadena, California, with the object of flying by easy stages to Tokio. He brought with him a Travel Air biplane, fitted with a Wright "Whirlwind" engine, which was erected and tuned up for him at Hanworth by National Flying Services, Ltd. Mr. Azuma started from Hanworth for Japan on July 27.

### Berlin-Chicago in a Klemm

AN attempt by two German airmen, Wolf Hirth and Oscar Weller, is being made to fly from Berlin to Chicago in a Klemm light monoplane fitted with a 40-h.p. Salmson engine. They propose to fly by easy stages via London, the Orkneys, Iceland, Greenland and Labrador. Herr Hirth, the pilot, is a well-known glider expert and was one of the founders of the German Gliding Association. He intends to spend a year in the United States giving demonstrations of gliding. Herr

Weller is a journalist. They left Tempelhof aerodrome early on July 24 for Cologne, and arrived at Croydon on July 25, proceeding later to Hanworth. Continuing their journey on July 27 they reached Kirkwall in the Orkneys that evening.

### London to Galway in an "Avian"

ON July 25, Lieut. C. John, R.N., son of the famous artist, Mr. Augustus John, flew his Avro-Avian, Cirrus II G-EBWU, from London to Galway in three "hops." Starting from Croydon, he had to land at Manchester for Customs clearance; he then flew down the coast to Holyhead, and turned west across the Irish Sea at this point. After another short halt at Baldonnel aerodrome, Co. Dublin, for more Customs formalities and refuelling, he proceeded to Galway and landed at Oranmore, where there is a landing ground of the Free State Army Air Corps. Lieut. John's intention is to spend a fortnight flying over the west coast of Ireland.

### The Schneider Imbroglio

THE Aero Club of France has followed the example of the Royal Aero Club of Italy by tendering an entry to the Royal Aero Club of the United Kingdom accompanied by the lower rate of deposit money, instead of the 200,000 francs decided upon by the committee of the F.A.I. last January. The British aero club had no alternative but to refuse the entry. The Italian club has made an offer to the F.A.I. that it should organise the race at Venice without requiring any deposit from entrants. The matter will doubtless be submitted to an independent tribunal set up by the F.A.I., a procedure which is provided for in the standing regulations of the contest.



# THE ROYAL AIR FORCE

London Gazette, July 25, 1930.

## General Duties Branch

The follg. are granted short service commns. as Pilot Officers on probation with effect from and with seniority of July 12:—R. Hanson, H. J. L. Hawkins, A. H. Hole, T. A. Jefferson, A. F. McKenna, D. H. Marsack, J. W. Martin, F. G. Mason (Lieut. 8th Bn. Duke of Wellington's Regt., T.A.), C. L. Monckton, M. A. Pavn (Sec. Lieut. 1st Bn., Essex Regt., S.R.O.), H. N. C. Ramsbottom-Isherwood, I. G. Ross, C. B. Smith, E. C. Smith-Ross, C. P. Villiers.

The follg. Pilot Officers on probation are confirmed in rank: June 28:—G. E. Agard-Butler, N. Alexander, F. C. Allen, C. A. Ball, G. Bearne, G. Calvert, N. J. Capper, I. A. Critchley, C. H. Glover, D. H. A. Golege-Steel, W. E. Grant, D. C. Harrison, A. H. Houghton, G. M. Ievers, F. J. B. Keast, D. W. Lydall, I. L. S. McNicol, C. E. Morse, J. T. Mynors, B. Paddon, H. G. J. Purcell, J. M. Waddell, G. N. Warrington, G. E. S. Williams.

Flight-Lieut. H. Hackney is placed on retired list on account of ill-health; July 23. The following Flying Officers are transferred to Reserve; July 18:—Class A.—P. E. Grenfell, A. E. Hill, and F. G. S. Wilson. Class C.—J. C. Lewis and J. N. Young.

Flying Officer R. A. R. Robinson relinquishes his short service commn. on account of ill-health; July 23. The short service commn. of Pilot Officer on probation J. W. P. Armitage is terminated on cessation of duty; July 17. The short service commn. of Pilot Officer on probation R. D. Cotton is terminated on cessation of duty; June 28. (Substituted for *Gazette*, July 8.)

## Medical Branch

Flight-Lieut. H. O. Sumerling, L.D.S., is promoted to rank of Squadron Leader (Dental) on promotion to Major in the Army Dental Corps; July 8.

## RESERVE OF AIR FORCE OFFICERS

### General Duties Branch

The following are granted commns. in Class A.A.(ii) as Pilot Officers on probation:—E. L. Briggs; June 25. J. C. Corby, R. E. Cowburn; June 30. R. S. Gladow; July 1. W. L. Garstang, G. P. Moss, A. G. P. Way; July 2.

## ROYAL AIR FORCE INTELLIGENCE

**Appointments.**—The following appointments in the Royal Air Force are notified:—

### General Duties Branch

**Flying Officers:** A. W. Elias, to No. 1 Sch. of Tech. Training (Apprentices), Halton; 1.7.30. J. A. Hawkings, to R.A.F., M.T. Depot, Shrewsbury; 1.7.30. J. D. Greaves, to R.A.F. Reception Depot, West Drayton; 1.7.30. R. F. Shenton, to Home Aircraft Depot, Henlow; 23.5.30. W. L. Bateman, to R.A.F. Base, Calshot; 7.7.30. W. G. Abrams, to Home Aircraft Depot, Henlow; 23.5.30. S. L. Blunt, to Aeroplane and Armament Experimental Estab., Martlesham Heath; 9.7.30. R. J. Clare Hunt, to Armament and Gunnery School, Eastchurch; 1.7.30. J. F. Griffiths, to Aircraft Park, India; 23.6.30. R. G. Hennessy, D.S.O., M.C., to No. 2 Armoured Car Co., Transjordan; 1.7.30. A. W. Hunt, to R.A.F. Base, Calshot; 16.7.30. N. B. Norris, to No. 216 Sqdn., Heliopolis; 3.7.30. D. J. Harrison, to R.A.F. Depot, Uxbridge; 18.6.30.

**Pilot Officers:** P. S. Ball, J. W. Bateman, R. B. Brown, J. E. F. Chapman, G. J. S. Chatterton, M. V. M. Clube, A. R. Collins, E. J. Gracie, R. G. Harman, I. B. Hills-Spedding, W. E. Hooper, R. L. Hoyle, A. J. McDougall, H. W. Mermagen, J. B. S. Monypenny, D. G. Morris, G. N. Snarey, G. G. Stead, N. C. M. Styche, M. R. D. Trewby, A. E. Upchurch, R. Wardrop, to No. 2 Flying Training School, Digby; 12.7.30. Lord Malcolm Douglas Hamilton, to No. 603 Sqdn., Edinburgh; 15.7.30. P. G. Harton, to No. 2 Flying Training School, Digby; 8.7.30.

### Stores Branch

**Wing Commander** W. E. Aylwin, to No. 1 Stores Depot, Kidbrooke; 3.7.30.

R. F. Egford, J. H. Edge; July 3. P. W. J. Pharazyn is granted a commn. in Special Reserve as Pilot Officer on probation; May 31.

The following Flying Officers relinquish their commns. on completion of service:—C. E. V. Graham, M.C.; May 8. C. L. Atkinson; June 19. Flying Officer H. H. Storrs relinquishes his commn. on completion of service, and is permitted to retain his rank; June 23.

The following are granted commns. in Class A.A. (ii) as Pilot Officers on probation:—E. A. Beale, S. T. R. Hemsted, P. T. Stephens, J. C. Ticehurst; July 7. F. E. Cowlrick; July 8.

The following Pilot Officers on probation are confirmed in rank:—R. D. Bednell; June 13. A. C. Buck; June 20. C. P. S. Smith; June 20. R. G. Shaw; June 21. W. Clarke; June 24. R. S. Sikes; June 24. I. B. Sherring; June 26. K. Shenstone; June 27. E. C. Fieldsend; July 1. N. D. B. Wood; July 1. D. Hay; July 3. E. G. Villiers; July 8. J. P. Dewsbury; July 15. D. J. L. Bryden; July 16. J. Leigh; July 17. C. H. N. L'Estrange; July 17; R. M. Henning; July 18. C. Bland; July 18.

Flying Officer J. E. Davies is transferred from Class A. to Class C.; July 17. Flying Officer J. Reekie is transferred from Class A.A. (ii) to Class C.; July 22. Flying Officer G. Clapham, A.F.C., is transferred from Class C. to Class A.; May 13. Flying Officer J. H. C. Harrold is transferred from Class C. to Class B.; June 10. The following Flying Officers relinquish their commns. on completion of service:—C. E. Kelly; June 23. A. D. Drysdale; June 27. Flight-Lieut. (Hon. Wing Commander) H. Wyllie, O.B.E., relinquishes his commn. on completion of service and is granted permission to retain honorary rank of Wing Commander; June 30.

## AUXILIARY AIR FORCE

### General Duties Branch

No. 602 (CITY OF GLASGOW) (BOMBER) SQUADRON.—The following to be Pilot Officers:—T. B. Smith; June 13. G. C. Philips; June 22.

No. 604 (COUNTY OF MIDDLESEX) (BOMBER) SQUADRON.—The following to be Pilot Officer:—R. Smallman-Tew; June 21.

**Squadron Leader** F. E. J. Coates, to Home Aircraft Depot, Henlow; 10.7.30. **Flight Lieutenant** J. S. Browne, A.F.C., to H.Q., Wessex Bombing Area, Andover, 21.7.30.

**Flying Officer** N. W. Law, to School of Army Co-operation, Old Sarum, 1.8.30.

### Accountant Branch

**Squadron Leader** R. Byrne, M.C., to H.Q. Wessex Bombing Area, Andover, 9.7.30.

**Flight Lieutenants:** O. K. Griffin, to Aeroplane and Armament Experimental Estab., Martlesham Heath; 18.7.30. E. V. Humphrey, to Station H.Q., Hornchurch; 22.7.30. R. G. Dyer, to No. 2 Flying Training Sch., Digby, 23.7.30.

**Flying Officer** K. A. Jackman, to Station H.Q., North Weald; 30.7.30.

### Medical Branch

**Flight Lieutenant** G. A. Ballantyne, D.F.C. (Dental), to R.A.F. Depot, Uxbridge, on appointment to a Permanent Commn.; 1.7.30.

**Flying Officer** F. B. Sumerling (Dental), to Medical Training Depot, Halton, on appointment to a Short-Service Commn.; 9.7.30.

### Chaplains Branch

Rev. A. W. Brown, to R.A.F. Depot, Uxbridge; 26.5.30.

## NAVAL APPOINTMENTS

The following appointments have been made by the Admiralty:—**LIEUTENANTS (F/O., R.A.F.).**—D. R. C. Hodson, to *Victory*; June 17. M. T. Cowin, to *Glorious*; July 14. D. J. Margetts and J. Brett, to *Pembroke*; Sept. 1. M. Cursham, to *Courageous*; July 21. J. E. Vallance, to *Courageous*; Sept. 1.

## IN PARLIAMENT

### Air Services

**LIEUT.-COMMANDER KENWORTHY**, on July 8, asked the Under-Secretary of State for Air if he will state what subsidy he would be prepared to offer to Imperial Airways, Limited, for operating an air-mail service between the north-east coast of England and the Continent?

**Mr. Montague:** It would be for Imperial Airways to lay before the Air Ministry detailed proposals for such an air service and to state what additional subsidy, if any, they would require for its operation. Pending the receipt and careful examination of such proposals, the Ministry is not in a position to state what, if any, subsidy would be given.

### Singapore Base

**MR. MONTAGUE**, on July 9, in reply to Mr. Lambert, said approximately £358,000 has been spent to date upon Air Force work at Singapore and that the strength of the Air Forces which will normally be stationed at Singapore as at present contemplated is one squadron of flying-boats and one squadron of land machines, apart from any Fleet Air Arm units which may from time to time be disembarked there.

### Aerodromes and Compulsory Acquisition of Land.

**SIR W. DE FRECE**, on July 10, asked the Minister of Health the attitude of the Government with respect to the proposal that local authorities should be empowered to acquire land compulsorily for airports?

**Mr. Greenwood:** Power for the compulsory acquisition of land for aero-

dromes is proposed in the Public Works Facilities Bill (Clause 2 and First Schedule, Part 1, 2).

### Northampton Municipal Aerodrome

**MR. MALONE**, on July 14, asked the Under-Secretary of State for Air what is now the policy of the Air Ministry in regard to the establishment of a municipal aerodrome at Northampton?

**Mr. Montague:** The Air Ministry's attitude to the general question of the establishment of municipal aerodromes has been explained in a circular sent to all town councils, and the terms of that circular are applicable to Northampton as to other important towns. In the circular the Air Council drew attention to the increasing development of air traffic and suggested that each corporation should earnestly consider the advisability of establishing a municipal aerodrome at an early date. It stated also that the council would be glad to advise on the suitability of any sites which the corporation might have under consideration for this purpose. My hon. friend is no doubt aware that at the request of the Town Planning Committee an Air Ministry official has already inspected a site for an aerodrome at Northampton. This was unfortunately not considered suitable, and the Town Planning Committee was advised to carry out a further preliminary survey for possible sites and informed that the Department would be glad to inspect and advise on any which might be found. No further sites have so far been submitted for inspection.

## PERSONALS

### Married

**SIR CHARLES HIGHAM** was married at Guildford (Surrey) register office on Thursday, July 17, by special licence to **JOSEPHINE JANET KEUCHENUS**, only daughter of Mr. and Mrs. HAROLD ARTHUR WEBB, of Cheltenham.

The marriage arranged between **Sqdn.-Ldr. DOUGLAS IRON** and **PHYLLIS VIOLET SANKEY** took place on July 7.

### To be Married

The marriage arranged between **Mr. J. C. ALAN**, R.A.F., and **Miss MARGERY CAMPBELL** will take place quietly at Lilliput, near Bournemouth, on August 7, 1930.

The marriage between **Flt.-Lieut. L. DALTON-MORRIS**, R.A.F., and **MARION**, younger daughter of Mr. and Mrs. A. G. ELLIS, of Bromley, Kent, will take place quietly on Monday, August 4, at Bromley.

The marriage between **Mr. F. G. H. EWENS**, R.A.F., and **DAISY KATHLEEN**, younger daughter of Mr. T. G. FIELD, of Nigeria, and Mrs. T. G. Field, of Exmouth, will take place on Saturday, August 2, at Exmouth.

### Death

The death occurred on July 12, at 2, Chesterford Gardens, Hampstead, of **ERNEST BROWN**, of Brown Bros., Ltd., Great Eastern Street.

### Item

**MR. ELMER AMBROSE SPERRY**, the inventor of the gyro compass, who died recently, left \$1,000,000 (£200,000) to the Y.M.C.A. in return for "the home and friendly guidance" given to him by that Association when he was poor.

## MODELS

### FLYING AT HALTON.

THE weather at Halton on July 19 was fine, but a gusty wind prevailed. There were between 200 and 300 aeromodelists all anxious to show off the flying qualities of their machines.

The first event was for Group-Capt. Landon's Cup, which was a competition for various wings of the Halton Model Aircraft Society. Their models gave a very good display. By the time this competition was over, all the competitors for the Lord Wakefield Cup Competition had arrived. Competitors were greatly handicapped with the gusty wind, which caused great difficulty in getting the models to rise off ground.

Mr. Willis (T.M.A.C.) was unfortunate in getting the wing of his model damaged before the competition, but, fortunately, he had a spare wing and was able to compete. Most of the English models were of a heavier construction than the Americans, but even that did not assist them against the wind.

The winning flight by Mr. Ehrhardt, U.S.A., was exceptional, the model rising beautifully into the air, and keeping aloft for 2 min. 35 sec. This caused great excitement among the spectators. The English competitors did their uttermost to exceed this flight, but unfortunately none of them could get anywhere near it.

Mr. W. J. Plater came second with an admirable flight 1 min. 23 sec. Mr. T. Newell's "Falcon" model was able to get off every time, but it got into the wrong air-currents and came in third with 1 min. 3 sec.

America must be congratulated on winning this event. Their models are constructed on a very scientific basis, and were handled very well, under extremely difficult conditions.

The judges were: Lt. Col. R. Kingsley-Pillers, O.B.E., B.Sc.; Dr. A. P. Thruston, F.R.Ae.S., M.I.Ae.E., M.I.C.E., M.I.Mech.E.; and S. F. H. Crouch.

Time Keepers were: A. F. Houlberg, W. L. Haas, and B. K. Johnstone, B.Sc.

After the tea interval the competition for the Farrow Shield opened. The wind by this time having subsided.

There were four clubs competing, H.M.A.S., S.M.A.E., T.M.A.C. and W.A.C. We believe that other clubs who were unable to be present were competing on their own ground.

Unfortunately, on account of the lateness of the start (after 8 p.m.), many of the aeromodelists who were intending to compete had to return home before the competition started.

The judges worked very hard and were kept busy until dusk. The arrangements made by the H.M.A.S. were excellent; the seating accommodation was very much appreciated by the spectators.

Everyone returned home after having had an enjoyable and instructive afternoon.

### SOCIETY OF MODEL AERONAUTICAL ENGINEERS (S.M.A.E.)

On July 9, at Halton, Mr. W. J. Plater put up two records for fuselage machines, raising the R.O.G. record to 110 sec., and the "hand-launched" to 162 sec. Will all those interested in model aeronautics in the Stoke-on-Trent district get into touch with Mr. F. Ratcliffe, 184, Victoria Road, Fenton, Stoke-on-Trent.—S. G. Mullins (Hon. Sec.), 72, Westminster Avenue, Thornton Heath, Surrey.

### A New Flying Helmet

COMFORT in flying wear has long been sought after by those manufacturers who specialise in such things as flying helmets and Sidcot suits, and the latest attempt to provide a helmet that will be perfectly easy to put on and remove, and yet will not require much adjustment of chin straps to make it a good weathertight fit when it is on, is the Binley Speed Helmet, which is being marketed by Burch's, of Bedford Street, Strand, as the B.S.H. Helmet. This is a well-made article with a wide chin strap incorporating press studs at the sides and a safety strap over the top of the head. It is fitted with the usual phone pockets. The main feature is the provision of a Zip fastener, which goes from the middle of the back of the head to the base of the neck. This, when opened, allows easy removal of the helmet, without necessitating disarrangement of the chin strap, and the helmet can be donned in the same manner, so that closing the Zip fastener ensures the whole helmet fitting at once.

### Our Blue Air Mail Pillar Boxes

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SPECIAL posting boxes have been erected in the City and West End of London for the reception of air mail correspondence only. These boxes, which are painted blue, have been available for posting since June 23, and are located at the following places:—

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Additional boxes will be provided shortly at:—Charles Street, Haymarket, S.W.1 (front of Imperial Airways Offices); Outside Parliament Street Branch Post Office, S.W.1.

### PUBLICATIONS RECEIVED

*The Cirrus Engine and the Light Plane.* Cirrus Aero-Engines, Ltd., Regent House, 89, Kingsway, London, W.C.2.

*Souvenir of the Royal Visit to Tees-Side:* Opening of the Constantine Technical College by H.R.H. Prince of Wales, K.G. Special Supplement to the Tees-Side Chamber of Commerce Monthly Journal. July, 1930. Tees-Side Chamber of Commerce, 7, Queen's Square, Middlesbrough. Price 2s.

*S.M.A.E. Journal. The Official Organ of the Society of Model Aeronautical Engineers.* Hon. Sec: S. G. Mullins, 72, Westminster Avenue, Thornton Heath, Surrey. Price 6d.

*Royal Air Force Quarterly. Vol. I. No. 3. July, 1930.* Aldershot: Gale and Polden, Ltd. Price 5s. net.

*Parachute.* By C. J. V. Murphy. London: G. P. Putnam's Sons, Ltd. Price 10s. 6d. net.

*Murder Off Broadway.* By L. Falkner. London: John Hamilton, Ltd. Price 7s. 6d.

*Magneto Manual.* By H. R. Langman. Lockwood Manuals. London: Crosby, Lockwood and Son. Price 7s. 6d. net.

*The Atlantic.* By Stanley Rogers. London: George G. Harrap and Co., Ltd. Price 7s. 6d. net.

### AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motors. The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

#### APPLIED FOR IN 1928

- Published July 31, 1930
- 6,876. C. R. FAIRRY. Rudders and control surfaces. (331,564.)
  - 10,177. H. R. RICARDO. Cranks. (331,505.)
  - 10,716. VICKERS-ARMSTRONGS, LTD., and B. W. A. DICKSON. Devices for carrying heavy bodies on, and releasing them from, aircraft. (331,587.)
  - 11,076. A. C. W. AIDIS. Production of maps by means of aerial photographs. (331,595.)
  - 13,880. S. G. BROWN. Gyroscopic turn indicators. (331,627.)
  - 38,151. L. RENAU. Arrangement and disposition of motors on aircraft. (331,801.)

#### APPLIED FOR IN 1930

- Published July 31, 1930
- 12,083. VICKERS-ARMSTRONGS, LTD., and B. W. A. DICKSON. Devices for carrying heavy bodies on, and releasing them from, aircraft. (331,591.)

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